PART TWO: The Agency History

THE OFI MISSION APPLIED

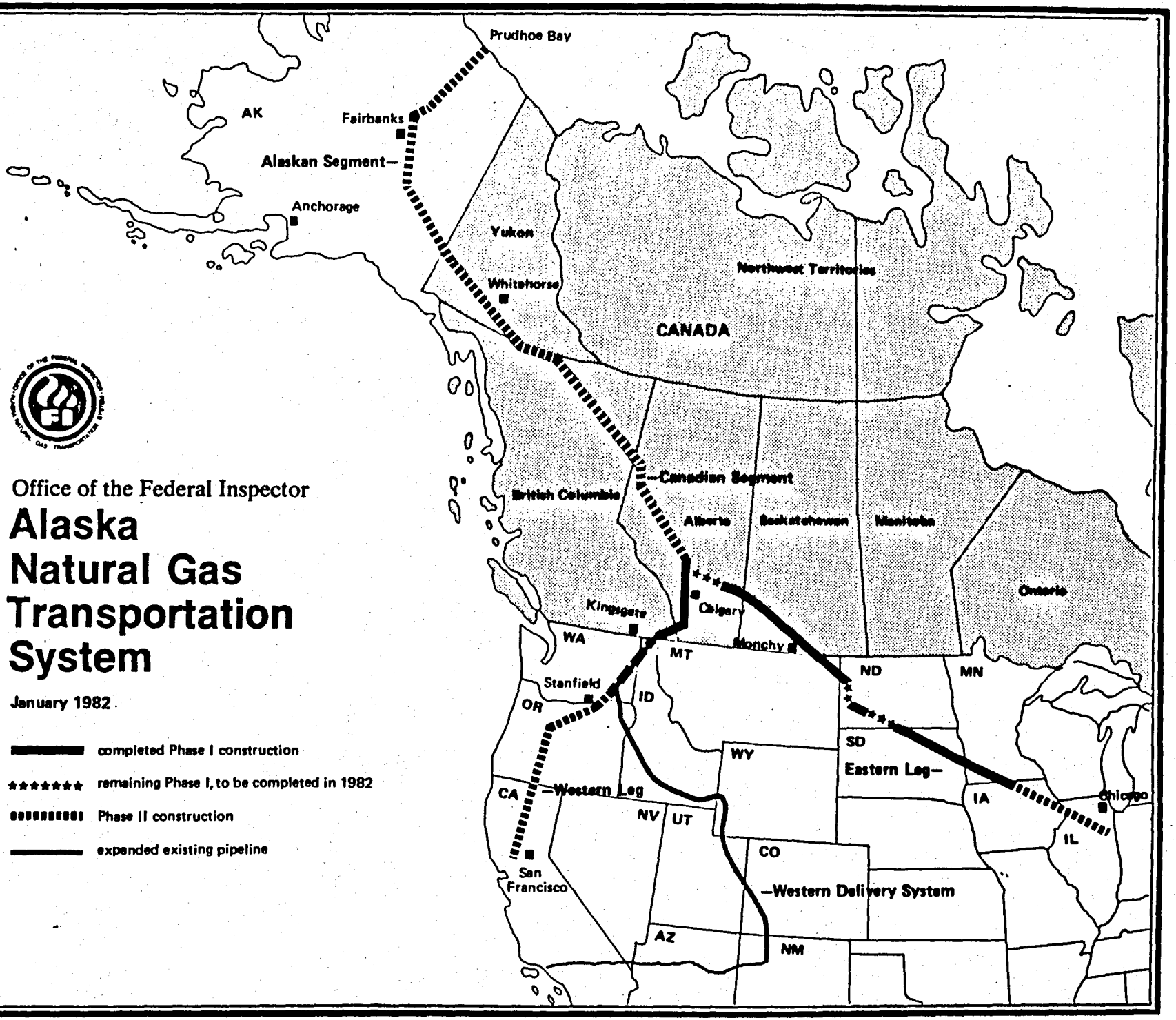
Chapters

11 Jack Rhett Takes Command, 1
12 The OFI Hits Stride, 31
13 The Waiver Package, 97
14 The East Leg Experience, 135
15 Inertia and The TAGS Challenge, 177
16 Epilogue, 210

List of Figures

Map - Alaska Natural Gas Transportation System

1. Second Organization Chart, 4
2. OFI Staffing Trends, 34
3. Final Organization Design, 36
4. FIMIS Documentation Hierarchy, 41
5. Chronology of Major ANGTS Events 3, 48
6. Estimated Volume of ANGTS Permits, 66
7. Initial Project Schedule, 68
8. Status of Alaska Leg DOI Stipulation (1.6.1) Plan Review, 72
9. Status of Alaska Leg Design Criteria Manual Review, 77
10. The Phase I Prebuild, 82
11. ANGTS Cost Escalation, 88
12. Alaska Northwest Natural Gas Transportation Company, 94
13. McMillian's Original Waiver Request, 99
14. President's Message/Findings and Proposed Waiver of Law, 108
15. NEICo Interlocking Directorate, 162
16. Map - Trans Alaska Gas System (TAGS), 192


Prudhoe Bay
AK
Fairbanks
Alaskan Segment—
Anchorage
Yukon
Whitehorse
Northwest Territories
CANADA
—Canadian Segment
British Columbia
Alberta
Saskatchewan
Manitoba
Ontario
Kingsgate
Calgary
Monchy
WA
MT
ND
MN
Stanfield
OR
ID
SD
WY
Eastern Leg—
CA
—Western Leg
NV
UT
IA
Chicago
IL
CO
San Francisco
—Western Delivery System
AZ
NM
Office of the Federal Inspector
Alaska Natural Gas Transportation System
January 1982
completed Phase I construction
remaining Phase I, to be completed in 1982
Phase II construction
expended existing pipeline

Jack Rhett Takes Command

John T. Rhett, Jr., entering the New Executive Office Building on July 13, 1979, his first day as the nation's first Federal Inspector, would be no stranger to his task. After all, Jack Rhett had been a leading consultant on the OFI plan and, from the very beginning, the top candidate for the chief executive position he now served. His long and diverse public works construction record, distinguished service with EPA and the Army Corps of Engineers - two of the five leading federal ANGTS agencies - and his familiarity with EPA's oversight of the TAPS project made his qualification unique. Furthermore, Rhett had a reputation as a facilitator, a public manager who knew how to reconcile differences, avoid misunderstandings, make hard but sensitized decisions and, consequently, accomplish his mission under the clock. Such were the attributes, all seemed to agree, that a successful Federal Inspector would require.

Rhett, in these first days, saw his early agenda in three parts. First, he had to acquaint himself with the various project principals, particularly the ANGTS sponsors, the Prudhoe Bay producers, Canadian dignitaries and Alaska state officials. Rhett believed it essential to develop frank and open relations with these actors to cultivate the proper climate of cooperation and concilillation. Second, he had a new office to staff, organize and fund. Rhett's management style centered on his people. "Pick good people and take care of them," he has observed, "and basically, they'll take care of you." /1 His organization, he admits, tends to flow from the capabilities and interests of his senior staff. Rhett does not typically "fill" slots, but rather often fits slots to the strengths and weaknesses of his top managers. Finally, he needed to begin certain essential oversight tasks, such as lower leg supervision and, in partnership with the FERC, cost allocation and tariff formulation. The project, particularly north of the border, was already underway; the steel pipe procurement "fait accompli" by the Canadian NEB and Foothills had indicated that. Congress was determined to avoid any similar surprises in the future and, after the long implementation process, was anxious for any positive, substantive OFI action to accelerate the project.

In his first eight weeks as Federal Inspector, Rhett traveled over 32,000 miles in the United States and Canada to acquaint himself with the sponsors and the project. /2 He visited with McMillian and his NWA staff at their corporate headquarters in Salt Lake City and with NWA's principal construction manager, Fluor Engineering, in Irvine, California. Rhett also traveled to Alaska to meet with state officials and lay plans for his Phase II Alaskan operation. He was, of course, already familiar with most leading ANGTS agency representatives, certainly the EPB members and alternates, but meetings were required to attend official matters, such as interagency agreements and AAO delegations. Additionally, Rhett, during this period, flew over much of the pipeline route, both in the United States and Canada.

Staff selection was a pressing consideration, determined in part by two factors. First, Rhett decided at the beginning that he "was hunting.. for bright, eager, younger [public manager] types" to lead his organization. /3 The decision, he knew, might have some consequences, most importantly in reduced organizational knowhow and leadership experience in the early stages of OFI operation. On the other hand, these "younger types," he believed, could bring an added measure of enthusiasm and open-mindedness. They might more readily adopt the OFI's "balanced evaluation" perspective than "old line" bureaucrats, accustomed to rigid regulatory enforcement, more strictly "by the book." Furthermore, Rhett placed a premium on loyalty, both to one's superiors and to one's organizational mission. The "younger types," he reasoned, might be less constrained by previous association than the "old line" types, some with long bureaucratic tenure in and enduring organizational allegiances to former departments.

Second, due to the project's expected fast start, Rhett sought staff who were already somewhat familiar with the impending OFI task or had been associated with the TAPS exercise. In fact, many of his selectees tended not only to be TAPS or ANGTS "smart," but had served important roles in these projects, despite relatively tender ages and limited general experience. Rhett was himself not an Arctic pipeline construction expert, and he knew he could not launch and marshall his fledgling agency without expert help. He knew, too, that OFI would have precious little time for orienting staff before beginning its responsibilities. His people, ideally, would hit the ground running.

Several key senior staffers, all of the senior executive service (SES) grade, were officially hired on July 12, a day before Rhett himself took office. /4 There was, first, Peter L. Cook, the EPA official who served as Rhett's confidant and often his spokesman during the period of reorganization plan formulation and the search for a Federal Inspector. Cook, only 35, was named OFI's Executive Officer, and would function as Rhett's deputy, with a special emphasis on headquarters matters. An aerospace engineer, he had served a variety of successively responsible professional positions in the National Oceanic and Atmospheric Administration (NOAA) before becoming Assistant Director of EPA's Office of Environmental Review.

Another initial appointment was Edward W. "Ned" Hengerer, 34, to General Counsel. Hengerer, as a FERC attorney, was perhaps the principal author of Reorganization Plan No. 1 of 1979, hence the basic OFI organizational concept. He was a key staffer of Adger's AGPO team at FERC, and along with Cook, probably knew more about ANGTS than any other staffer. Hengerer, who had joined the Washington law offices of Dickstein, Shapiro and Morin shortly before, resigned to serve Rhett, who would come to rely upon Hengerer's judgment in many matters. Cook and Hengerer were ideal candidates, given their basic understanding and prior involvement with ANGTS, to spearhead the new OFI team.

Three remaining initial appointments were administrative and Rhett and Cook relied upon their EPA experience to fill them. Willis E. Greenstreet, 42, was appointed Director of Administration, a position he was currently holding at the Merit Systems Protection Board. Greenstreet, earlier director of EPA's Management Information Systems and Data Systems Division, was regarded as a first-rate computer and data processing executive, essential to an advanced and elaborate management information system (MIS) such as that OFI envisioned and, very shortly, would contract for design. Greenstreet was expected to supply an informed, steady hand at the administrative helm. His deputy was David C. Rector, also 42, a personnel executive who had, successively, served as EPA's Headquarter's Personnel Officer and, then administrative officer for the President's Reorganization Project, from which the OFI could be traced.

The third appointment was Jerry B. Vance, 43, a grants and procurement director at the Department of Health, Education and Welfare (HEW) to Director, Contracts Management. He, like Greenstreet and Rector, had been an EPA hand (Contracts Policy and Operations chief) during Rhett's tenure as EPA's Deputy Administrator for Water Program Operations. Vance had also been associated with Rector at OMB's PRP, where he apparently took a major role in developing the implementation plan for the Federal Emergency Management Agency (FEMA). /5

By mid-October, the OFI had hired 21 additional employes, all at subordinate levels, most serving in some administrative capacity and many from ANGTS-associated agencies. /6 Several of the new employes, such as John L. Figel, a young FERC mechanical engineer with a flair for ADP operations, were recruited from Adger's AGPO. Others, like Nancy Livingston, a budget analyst from Agriculture, had been agency representatives on the OMB-OFI Task Force for ANGTS. Still others, such as Ben White, a Forest Service personnel specialist, had served on the President's Reorganization Project at OMB.

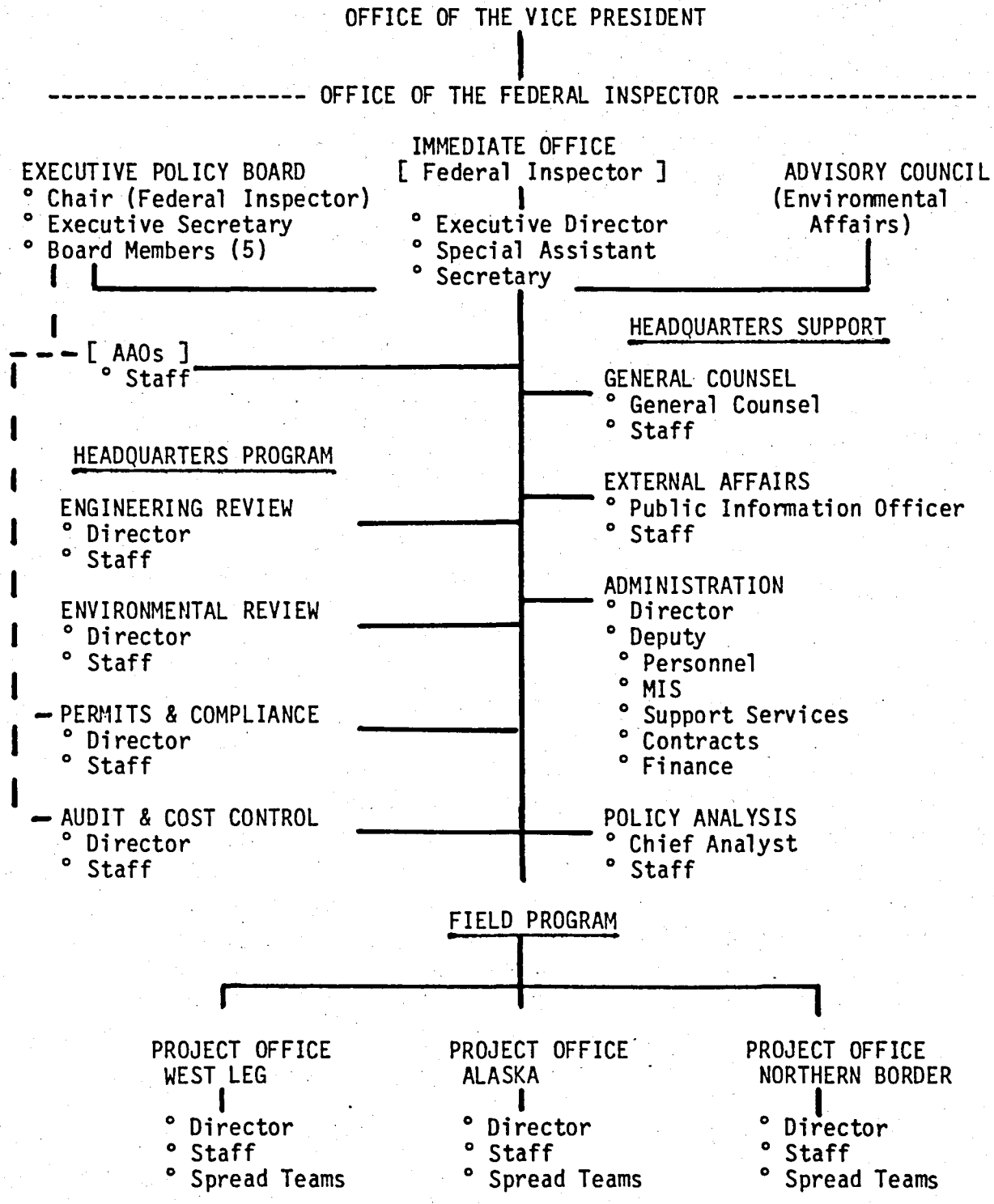
In the first weeks, Rhett directed Cook to develop a new organizational design. A preliminary plan, quite distinct from the Donahoe-Cramer plan, was established. /7 (See FIGURE 3-1) The new organization plan, most significantly:

- Deleted both Canadian and Congressional liaison offices.
- Withheld a deputy federal inspector status for field office directors.
- Supplemented OFI headquarters staff offices.
- Expanded the number of supporting administrative staff.
- Proposed a Citizen's Advisory Council to "provide an avenue for citizen input into certain major decision areas." /8

Headquarters staff offices were conceptually separated into two groups, support and program. Support offices included Administration, General Counsel, Policy Analysis and External Affairs. External Affairs would attend public information and routine liaison responsibilities

FIGURE 3-1: Second Organization Chart

Developed by Cook
Internal Organization Initiative
Autumn 1979



Source: OFI Quarterly Report #1, October 1979

while Rhett and his immediate staff would handle the more sensitive Canadian and Congressional issues which Donahoe and Cramer had assigned to liaison officials. The program offices consisted of Engineering Review, Environmental Review, Audit and Cost Control and Permits and Compliance (the "one-window" office), all of which would provide institutional staff to the AAOs. Field offices, composed of an office director, small administrative staff and spread teams, were projected for all three U.S. legs: San Francisco for the West Leg, Omaha for the East Leg and Anchorage or Fairbanks for the Alaska Leg. As noted earlier, a fourth office, composed mostly of engineers and environmentalists, was proposed for Irvine, California, the headquarters of Fluor Corporation, the ANGTS Alaska general contractor, to facilitate OFI's review during the Alaska Leg design phase.

In the new plan as in the Donahoe-Cramer design, the AAOs were organizationally separated, granted office status independent of the OFI's line chain of command. AAOs were viewed as "outsiders" on the inside, officials temporarily assigned to the OFI to facilitate its ANGTS mission and to safeguard the regulatory duties of their sponsor agencies, albeit under the direction of the Federal Inspector.

Rhett, like Horvath, the RAND analyst, was somewhat uneasy about the potential "two-boss dilemma" faced by the AAOs, although his concern rest mostly with the consequences it might have for his own administration of the agency and his imperative for central project control. He had insisted, during the drafting of the reorganization plan, that the AAOs be responsible to the Federal Inspector, not to former departments, even thought they would be responsible for the enforcement of departmental authorities. The AAOs, although expected and encouraged to consult with their sponsor agencies and their EPB representative, were under the Federal Inspector's command. Rhett, however, realized that formal stipulation alone would not assure AAO sympathy for OFI objectives. He would have to persuade AAOs that what he wanted for the project - his own goals and orientations - could be consistent with their own responsibilities. This was a "team building" exercise, one which required both time and care. Rhett would have to work individually with the affiliated AAOs to win their confidence and to assuage any fears that their opinions or responsibilities might be overlooked in an OFI alliance.

Rhett's dilemma was how best to utilize the AAOs without neutralizing them. He needed them to contribute to the OFI cause without either undermining his central coordinative role or sacrificing their agency's regulatory integrity (since such sacrifice would jeopardize Rhett's own responsibility for ensuring ANGTS oversight). Some critics of the OFI concept had predicted that the agency would err on the side of project facilitation rather than regulatory compliance, that OFI would unduely accommodate the sponsors. Rhett did not wish to leave himself or the OFI vunerable to such criticism. Instead of dampening the AAO's regulatory enthusiasm, Rhett hoped to complement it with a sense of

"balanced evaluation" - weighing the imperatives of regulatory acumen against the practical consequences of adverse regulatory determinations on ANGTS construction.

Rhett was largely successful in his arguments for central enforcement, administered through his offices. To this end, an informal agreement was reached at the Assistant Secretary level among the departments and agencies with ANGTS interests that, for Phase I construction at least, the enforcement effort would be consolidated by OFI. The agreed plan established AAO affiliation with OFI staff, either through association, a staff consultancy officially detached from the formal OFI organization, or by staff integration, the strategic placement of AAOs in OFI offices where they could best utilize their substantive expertise. A few agencies, including the Army Corps of Engineers and the Departments of Energy and Labor, were not as interest in routine, day-to-day operations, and did not an affiliate presence. Instead, they were simply apprised of meaningful developments through standard reports and occasional meetings.

The remaining agencies satisfied their desires for a more active role through association or integration. DOT, for instance, selected the former course. It abandoned its preliminary plan for a large, independent project office as a result of the agreement and, instead, assigned an ANGTS project director to collocate with the Federal Inspector. After DOT declined Rhett's offer to appoint its AAO as OFI Chief of Pipeline Engineering, the AAO became an associated staff advisor, providing enforcement oversight, technical expertise and agency liaison to OFI under the DOT banner. Three agencies did decide to integrate personnel into the OFI management structure. Earl N. Kari, an environmental engineer, assumed a leading post in Rhett's Office of Environmental Review and eventually became its director. FERC's AAO, John Adger, was eventually replaced by J. Richard Berman, an Interstate Commerce Commission (ICC) executive whom Rhett appointed his Director of Audit and Cost Analysis.

At DOI, Martin decided to supervise his department's AAO, William M. Toskey, directly from his DOI office. This would prevent more provincial department interests from dominating the AAO's purview. Toskey was concurrently appointed as OFI Director of Permits and Compliance, and made responsible for, among other things, the establishment of OFI's enforcement policies and procedures. In this capacity, Toskey was organizationally positioned to ensure that the permits, terms and conditions usually issued and enforced by DOI, as well as other agencies, were expedited by the department and properly attended by OFI headquarters and field staff.

Although the President's Reorganization Plan stipulates that the Federal Inspector must delegate enforcement authority to the AAOs, the timing, manner and precise nature of this delegation was not stipulated by law or regulation. Rhett, upon the Hengerer's counsel, concluded

that the particulars of this delegation were his to decide. A kind of delegation was actually granted to the AAOs, in that each agency interested in playing a substantial, day-to-day role in OFI affairs was invited to integrate its AAO into an important OFI position. Such informal delegation continued to govern OFI-AAO relations throughout Phase I construction, as the difficult practical issues regarding AAO enforcement within the OFI did not appear to arise. The hard questions were deferred until Phase II remobilization, to be resolved by the responsible agency officials at that time.

A final organizational matter demanding attention, in addition to staffing and agency design, was the budget. Soulen, as acting EPB executive director, submitted a FY 1979 supplemental budget request for $700,000 and a FY 1980 amended budget request for $10.222 million to James T. McIntyre, OMB director, on May 23, 1979. /9 By July, OFI's requirements had been reduced and its FY 1979 grant, accordingly, was only $400,000 in budget authority and an employment ceiling of 25 full-time positions. In June, OMB approved $15 million in budget authority - considerably more than the OFI had requested, indicating the Carter Administration's commitment to mobilize the agency as quickly as possible. The appropriation included salaries for 130 employes.

Beyond introductions and preliminary organizational matters, the OFI had several impending oversight responsibilities. Perhaps most important of all was preparation for the transfer of FERC regulatory functions, which included construction cost control, audit, the IROR, rate base formation and procurement. The FERC, led by Adger and his surviving AGPO staff, had issued two important project orders in August, the first, "Order Approving Alaska Segment Design Specifications and Initial System Capacity," on August 6. /10 It determined that the Alaska segment would consist of 48-inch diameter pipe at 1,260 pounds per square inch (psi) allowable pressure, and that compressor station size and spacing should be predicated for an initial capacity of 2.0 to 2.4 billion cubic feet per day, with expansion permissible to 3.2 billion daily. This enabled NWA to proceed with its planning and development activities.

The second order, on August 24, specified that the producers of North Slope gas - Exxon, ARCO and Sohio - would have to build, finance and operate the $2 billion to $3 billion gas conditioning plant at Prudhoe Bay. /11 Conditioning was necessary to remove certain chemical impurities before standards for gas transport could be met. Before August, neither the producers nor NWA, the sponsor, had filed necessary permits for the facility. It was believed that this FERC determination of responsibility would encourage permit application.

The commission, 17 months after issuing its first proposed rulemaking on the IROR mechanism, was still refining it. On June 8, 1979, FERC issued Order No. 31, "Order Setting Values for Incentive Rate of Return, Establishing Inflation Adjustment and Change in Scope Procedures,

and Determining Applicable Tariff Provisions." /12 It gave concrete substance to Order No. 17, the December 1 ruling which outlined the IROR's basic structure. As its cumbersome title implies, the 255-page order established official values for the IROR, including a 1.3 Center Point and a 17.5 percent rate at Center Point for Alaskan construction - both comparable, but somewhat lower, than the Canadian factors. /13 It also delineated "Change in Scope" mechanism, which would "protect the project sponsors against reductions in their rate of return caused by major events that drastically increase the cost of the project." /14 Three months later, on September 6, 1979, Order No. 31-B was released. /15 It was issued, after a rehearing was conducted in early August on the previous order, to clarify several remaining points of IROR contention. Together, these two orders described and justified the government's IROR concept, formula and cost factors for both the East Leg and the Alaska Leg segments.

Of course, the federal government's two major ANGTS authorizations were the FERC's certificates of public convenience and necessity, which licensed the project and specified the conditions under which it could operate, and DOI's agreements and grants of right-of-way, which governed construction on and operational use of federal land. Although the agencies themselves would issue these certificates and grants, OFI was created to facilitate and coordinate that effort and to ensure that the conditions of their issuance were enforced. In the ANGTS instance, two separate sets of stipulations were developed. As the OFI informed Congress in its first Quarterly Report:

> One [set], developed by the [FERC] for inclusion in its Certificates, will apply to private lands. The other set will be attached to the Department of Interior's Grants and will apply to Federal lands. To comply with the requirements in the Decision, that the terms and conditions...which pertain to State and Federal lands shall be as similar as possible, the State of Alaska has participated in the development of these stipulations from the beginning. /16

The sponsors also participated, although, as the GAO discovered, they exercised less influence than they would have preferred.

ANGTS oversight, as streamlined as it may have appeared in contrast to TAPS regulation, was still a rather complicated web and rigorous complement of regulatory responsibilities. It might be useful, from a conceptual standpoint, to classify these requirements and conditions by the source of their origin. This creates a "compliance typology" the government established for the ANGTS:

° Decision terms and conditions: These requirements comprised an inventory of specific governmental objectives in many project areas, including finance, cost and schedule control, minority employment and business affairs, and environmental protection. In large part, they repre-

sented the Carter administration's preferences for project construction and administration, such as the insistence on private financing, the denial of cost-plus type contracts or the prohibition of producer ownership. Some, such as the equal employment imperative, were highly political in nature and some, such as the cost-plus contract prohibition, did not necessarily reflect standard regulatory practice. These terms served as general principles for extrapolating more specific conditions in the stipulations.

° Basic project stipulations: These requirements, embodied in the certificates, agreements and grants of right-of-way discussed above, set "general administrative procedures and standards" for ANGTS management, project construction and environmental activity. /17 While they did include and operationalize the Decision's terms, they represented, for the most part, "institutional" regulatory standards, more detailed and more comprehensive than the terms. The ANGTS stipulations were essentially usual regulations applied to similar projects, not formulated, like many of the Decision terms, expressly for it. Most were products of a long regulatory evolution.

° Site-specific terms and conditions: These requirements, formulated and issued on a case-by-case basis, were expected to be common in a construction project as uncertain as ANGTS, where regulatory flexibility was essential. They would, however, occupy only a narrow discretionary realm ungoverned by the Decision's terms or the general stipulations. These terms would be developed, probably jointly by the relevant ANGTS agency and OFI field staff, immediately prior to the issuance of a specific authorization.

Rhett understood that ANGTS was no standard regulatory endeavor. First, the ANGTS maintained a high profile, lending particular weight to the Decision's terms. The President and Congress would not let him slight them. Furthermore, not all the terms could be completely integrated into the stipulations, perhaps leading to a potential clash between the Carter administration's preferences and standard regulatory practice. An agency might be less enthusiastic about issuing a permit whose compliance subordinated a regulatory procedure to assure a Decision condition. Finally, the line's Arctic technology was too uncertain to produce any hard and fast regulatory precedent. The ANGTS departments and the OFI would, as they went along, have to develop some of their own standards. The Federal Inspector could not have underestimated the formidability of his regulatory task.

A final regulatory issue involved Section 28(1) of the Mineral Leasing Act, which declared that applicants for rights-of-way across and temporary use permits on federal lands must reimburse the federal government for the costs of application processing and governmental monitoring. The sponsors, particularly NWA, were anxious to limit any expenses this provision might entail, since so much of the ANGTS traversed federal land. (Alyeska and the defunct Arctic Gas group, an original

ANGTS contender, were in court at the time contesting the administration of the act.) Additionally, a practical consideration for Interior, OFI and NWA was how to track reimbursable expenses, given the OFI's extensive regulatory involvement, "one-window" for permiting and complete responsibility for enforcement, and its unitary budget. Arrangements had to be made to identify OFI's "processing and monitoring" costs for reimbursement.

The Federal Inspector, apart from regulatory review, had to deal with several technical issues, with design review among the most prominent. In accord with the President's Decision, no ANGTS construction could proceed until after 70 percent of the total project design had been completed and approved by the OFI. The perceived TAPS failure, in part, was attributed to incomplete design and inferior governmental review of design. Rhett, intent on ensuring a successful, well-integrated design as his initial ANGTS responsibility, wondered if a private engineering firm, more experienced in Arctic pipelining and engaged by contract, might not provide a capability the government would otherwise lack. While he pondered this issue, OFI staff acquainted itself with sponsor pipe-burst testing in England, permafrost research in the North American Arctic and a study undertaken to protect the TAPS against any damage during the construction of ANGTS, which would share part of the same right-of-way corridor.

The ANGTS construction schedules were beginning to take shape, now that several important regulatory matters were being resolved. The ANGTS, again, was to be built in two phases. Phase I, described earlier as the prebuild, was enabled by President Carter's and Prime Minister Trudeau's preliminary intention in Autumn 1977 to "swap" Alberta gas, made available to American consumers as soon as possible, for Alaskan gas, to be shared later with the Canadians. It consisted of pipeline construction from James River Junction, where the project split in southcentral Alberta, south to Ventura, Iowa, in the east and to Stanfield, Oregon, to the west. Phase I constituted an important transmission link for Albertan gas producers until Phase II, the ANGTS Alaskan and northern Canadian sections, was completed for Prudhoe Bay gas delivery.

The Pacific Gas Transmission (PGT), a subsidiary of Pacific Gas & Electric (PG&E), organized to finance and supervise construction of the West Leg pre-build, the first of the ANGTS segments. PGT hoped to award bids by 1980 and begin construction shortly after, certainly by the summer. The West Leg pre-build, as noted before, involved four "loops" of about 160 miles of new pipe and compression and meter stations in Idaho, Washington and northern Oregon. The West Leg was not subject to IROR provisions and involved rather standard pipelining technology, but since it was part of the ANGTS, the OFI was responsible by law for its oversight. Given PGT's accelerated preliminary timetable, Rhett would have to mobilize a West Leg Field Office within a few months. There would be designs to approve, permits to coordinate and, shortly there-

after, compliance to enforce in the field. If Rhett did not want the project to be delayed by OFI's slow mobilization, he would have to move as swiftly as the PGT sponsors.

Still other issues concerned the new Federal Inspector. One was the project's socio-economic impact. TAPS construction had disrupted the existing social infrastructure of the Alaskan Arctic, especially in small towns and communities along the right-of-way. After TAPS, there would be no return to the wilderness, but ANGTS could be managed to soften the impact of additional progress on one of the nation's most distinctive native lifestyles. Although the State of Alaska had, for obvious reasons, taken the government's lead on this issue, Rhett had an obligation to participate and contribute.

ANGTA and the Decision intended that the OFI, in whatever form it might take, and the ANGTS be showcases for the Carter administration's equal employment opportunity and minority business enterprise (EEO/MBE) initiatives. /18 Sen. Jackson, at Rhett's confirmation hearing, raised the issue in no uncertain terms:

> Jackson: Can you assure the [Senate Energy and Natural Resources] committee that you intend to pursue a minority contracting program for the gas pipeline?
>
> Rhett: Senator, I can assure the committee I feel very, very strong in this area myself, and I think my previous record shows this.
>
> Jackson: I want to say that I want obviously a real program for minority contractors. We don't want just to give the appearance.... I just want to be sure that it is a bona fide effort and that minorities can play, I think, a very important role here. And it is essential that we get them into the mainstream. You agree?
>
> Rhett: Very much, sir. I understand the problem very well. I have it [EEO/MBE] in the [EPA] construction grant program, and we have demonstrated a good means of participation. /19

Almost immediately, Rhett prepared an internal affirmative action plan and began his search for qualified minority staff. Minority recruitment, first, would face the same disadvantages as senior staff recruitment: headquarters relocation to Alaska and agency termination a year after initial ANGTS operation. Second, most federal departments during the Carter administration had developed their own ambitious affirmative action plans and targets. This made Rhett's hiring task even more difficult. How might he entice top minority staff prospects, many highly valued in their own organizations or vigorously recruited by other government agencies, to join the OFI, despite the Alaskan move and the OFI's short organizational duration?

Primary EEO/MBE goals, however, dealt with the contractors. It was the ANGTA's and Decision's intent to promote both the hiring of minority contractors and minorities by nonminority contractors. Here again,

Rhett faced some frustration. Although competitive minority businesses would be capable and interested in many subcontract areas, such as food service, few would be qualified for the more technical and central aspects of Arctic pipeline engineering and construction. Rhett had an obligation to encourage and seek minority contractors, but he saw a more compelling responsibility to ensure that the project's contractors were capable of satisfying highly specialized and, often, extremely sensitive and difficult tasks. Reconciliation of these objectives, he suspected, would not always be easy.

With regard to financing, Rhett could do little but observe. The Alaska state legislature remained adamant: they were not willing to commit funds before the project's prospectus was complete. Schlesinger, meeting with the Prudhoe Bay producers on Carter's orders, outlined a proposal on August 8 by which the producers would provide $2 billion for the gas conditioning plant and $2.7 billion in guarantees against project cost overruns. /20 The producers refused to commit funds without a voice in project management. In October 1979, shortly before Congressional hearings on the ANGTS' progress, Exxon announced that the producers, as a counter offer to the Schlesinger proposal, would assume 40 percent equity and 40 percent debt for the ANGTS, provided:

- Construction and operation of the conditioning plant would become the responsibility of Alaskan Northwest, the Alaska Leg sponsors.
- Producer participation in system ownership (equity) would be approved by FERC.
- The present partnership agreement would be revised for a two-thirds vote on significant issues, which would neutralize some of the influence exercised by McMillian and his allies. /21

The two proposals constituted a sincere dialogue, but failed to reconcile the major obstacle - producer financing without ownership. The administration was intent on keeping the producers out, and the producers were insistent upon being counted in. Negotiations would continue into the new year.

By autumn 1979, Rhett's project orientation was nearly complete. Organizational design and staffing were progressing and early oversight responsibilities had commenced. The OFI experiment was substantially underway. As with any highly visible, novel government enterprise, the Congress was anxious for a status report. In fact, a major justification for the independent OFI idea was the agency's anticipated accessibility and responsiveness to the Hill. The ANGTA, among the Federal Inspector's five central duties, identified the following:

> (E) [K]eep the President and the Congress currently informed on any significant departures from compliance and issue quarterly reports to the President and the Congress concerning existing or potential failures to meet the construction schedules or other factors which may delay the construction and initial operation of the system.... /22

The OFI, apart from accomplishing its objectives, had to communicate and defend its accomplishments. Congress would determine if the OFI, in its supervision of the ANGTS project, was meeting expectations.

Congress would not wait long for its first inquiry. As noted in the previous chapter, Schlesinger's observations in January 1979 on the possibility of federal loan guarantees had stimulated open concern in the Congress. Speculation increased over ANGTS's inability to attract financing, attributed to increased gas availability, due to deregulation and increased imports from Canada, and the project's own prohibitions, as specified in the President's Decision. Rep. Harold Runnels (D-NM), chairman of the Subcommittee on Oversight and Investigations of the House Interior and Insular Affairs Committee, responded to this Congressional interest by scheduling hearings on the ANGTS for October 15, 1979 - only three months after the new agency's creation. /23

The informational nature of the Runnels' hearings were emphasized by the chairman:

> Two factors, the pipeline's impact on our domestic energy supply picture and the reorganization of the Government to accomplish a specific energy goal, underscore my interest in holding these hearings....
>
> There are questions about the pipeline which cannot yet be answered. We want to learn about these issues, whether they are environmental, technical, or financial, and about the issues which have already been resolved through the diligent efforts of the sponsors and the Federal agencies. This subcommittee intends to keep an open minded and supportive position in the process of identifying and resolving conflicting interests. In any project of this magnitude and complexity those interests are serious and can have long-range impacts. It is our intention to continue to bring significant issues to light through further hearings in the months ahead. /24

On October 15, the subcommittee heard from, among others, the four sponsors responsible for building the system: Robert L. Pierce, president and chief executive officer for Foothills; McMillian, of Northwest Alaskan (NWA), the lead partner of Alaskan Northwest; John A. Sproul, executive vice president for PG&E; and J. Conrad Pyle, project manager for Northern Border, the East Leg consortium.

Pierce, in his opening statement, explained that Foothills costs for the Canadian portion of the system had risen from $4.235 billion for a January 1983 startup to $5.768 billion for the revised date, late 1984. The "principal cause of cost increases...is delay," he advised the subcommittee. "Continuing delay makes any project more costly, particularly now given the current inflation rate in North America and

the spiraling cost of capital." /25 Pierce, in response to a question by Rep. Don Clausen (R-Calif), summarized the major delays, each of which originated in the United States:

> [For instance,] the incentive rate of return system is something that people have been grappling with for the last 14 to 16 months... Until you know the basis upon which you are going to earn a return, you can hardly go to somebody and say invest, because as we all realize, pipelines being regulated, you do not invest for speculative purposes....
>
> One of the other situations has been the design of the system. Although our system design has been approved in the certificates essentially given, subject to the final engineering, the Northwest Alaska System has just been in the last month, last 2 months that there has been a decision as to the size of the pipeline and the pressure. /26

Furthermore,

> We think that the Federal inspector has been a very positive thing, but we [needed and] expected the Federal inspector a couple of years ago. /27

Pierce said "we are hopeful...a significant portion of the Canadian-United States segments can be prebuilt within the next 2 years." /28 Prebuild would extend the construction period, reduce the cost of service for Alaskan gas, improve the earnings and cash flow of the sponsors and "demonstrate that the large diameter high-pressure pipeline can be installed and safely operated without major cost overruns and schedule delays." /29

However, before any construction proceeded, Foothills and its investors requested two assurances: some further sign of American commitment to the Alaskan segment and a fair and reasonable return on total investment, at or in excess of 16 percent. These concerns must be satisfied, Pierce observed, before investors would come forth with the necessary $5.8 billion. The specific form of guarantees would not become apparent until 1981, when the sponsors proposed and the Congress enacted waivers to ANGTA and Decision.

McMillian opened his testimony by praising the competence of Foothills, his Canadian ANGTS partners, and by reiterating "our increasing need for the Alaskan gas." /30 He listed several "positive developments" since project approval by the Decision:

- Passage of the NGPA, which established a field price for Prudhoe Bay gas.
- Appointment of Rhett as Federal Inspector.
- Execution of Alaskan gas contracts by the producers.
- Determinations by FERC on pipeline size and pressure, on the

IROR mechanism, and on producer responsibility for conditioning plant costs.

° Approval of the basic ANGTS alignment by Interior, which enabled detailed planning and design.

° Acquisition of Alyeska's campsite facilities and basic geotechnical data used during the TAPS project.

"We think there are still some critical items to resolve," he added, acknowleging that the $15 billion project was running between one and two years behind schedule. "We need more equity participants in the project and we need the producer support for financing or we cannot finance the project privately." /31 McMillian explained that the producers' gas contracts had been awarded, in large part, to four major gas transmission firms, including Columbia Gas, who were not yet consortium equity participants. The holdouts might be interpreted in several ways: as lingering protests in favor of earlier El Paso or Arctic Gas associations; as a disinclination to join with Alaskan Northwest, led by McMillian, widely regarded as an entrepreneural maverick who insisted on controlling the action; or simply, as McMillian suspected, as a means of gaining free rides under the "common carrier" provision applicable to the ANGTS.

By law, the owners and operators of a gas transmission facility must make their system available to unassociated producers or distributors with gas to market. "It [the holdout issue] has been quite a concern to all of us in the project," McMillian admitted, "because we are spending around $4 million a month on engineering work and geotechnical work and planning" while nonassociated natural gas companies, with Prudhoe Bay contracts, sit around and wait. /32 McMillian continued:

> We are encouraging these people to join. If they do not we are going to have to come back to you [subcommittee] and ask that the Alaska Natural Gas Transmission Act [ANGTA] might be modified, because we think it is unfair for a majority of the industry to have to bear portions of the developmental costs of this project, which keep rising, and the others not to bear their part. /33

Runnels, citing Sohio's aborted trans-America oil pipeline project, which was scrubbed after a $40 million investment, was very sympathetic:

> I am amazed that people will sign contracts to contract for gas and then not join in the project, because their contract is not worth the paper it is written on if they do not have a delivery system. /34

The dialogue continued.

> Mr. McMillian: They can transport their gas through our system without putting in a penny.
>
> Mr. Runnels: You have got to build it.

Mr. McMillian: If we do not build it it is not any good to them.

Mr. Runnels: Under present law nobody else can come in here and advocate building a pipeline, can they?

Mr. McMillian: No, sir.

Mr. Runnels: Here you sit with a piece of paper and authority for you and your group to build a pipeline on this side; over...on [that] side there are some people who own the gas, and they are not joining the project. So in the meantime, stockholders in Canada and stockholders here in America are spending tremendous amounts of money, and nothing is developing.

Is that correct?

Mr. McMillian: That is correct.

Mark J. Millard, chairman of Shearson Loeb Rhoades and financial advisor to NWA since 1976, argued with Pierce that the government's tardiness in mobilizing the OFI, in establishing a field price for Prudhoe Bay gas and in making determinations on several critical regulatory issues had damaged financing prospects, since inflation had risen from under 10 percent to over 14 percent. /35 As he remarked:

> The facts of finance today are very different from those which existed in 1977. We are dealing with...[very high] interest rates and with a rate of inflation unprecedented in the history of the Nation. /36

He did note, somewhat contrary to McMillian, that equity investors could not have been expected to commit themselves before preliminary issues - OFI organization, gas prices and regulatory groundrules - were resolved. Now that they were becoming clearer, "we are [ready] to test our belief that it [ANGTS, privately financed] can be done provided assistance in this operation which we need and which we think is justified [from the benefiting parties] will be there." /37

Clausen asked Millard to elaborate on a passage from his written testimony:

> A satisfactory financial agreement with the producers must precede serious conversations with the financial institutions. Failure to obtain that agreement could jeopardize private financing. /38

Millard responded:

> The world is aware of the importance of the economic contribution which the marketing of Alaskan gas would make to the well-being of the oil giants owning Alaskan gas, and I think it is also known by one and all the parties concerned, including these three companies, are very much interested in matters which concern the public welfare in the field of energy.
>
> A refusal by the oil companies to do their financial share, which can be measured in general terms remembering what they have done

> when it came to financing the movement of the crude oil, and the general development of the Prudhoe Bay field would perhaps be regarded as a vote of no confidence, especially since the very same parties are the ones who probably have maximum experience in the engineering technical and organizational problems which the construction of this pipeline must face. /39

Runnels reminded the subcommittee members that the President's Decision specifically "forbids the oil companies, which we have been talking about, from holding an equity position in this pipeline." /40 McMillian acknowledged this, but added that the prohibition was levied as an anti-trust measure. "There are many forms of equity," McMillian observed. "There can be preferred equity where they (producers) have no voting rights but have the same income rights as common equity. There are many ways this could be structured..." to involve the producers in equity financing without granting them managerial control. /41

Nevertheless, McMillian appeared as though he was not yet willing to admit the producers as equity partners.

> ...[W]e feel that the debt markets will give us our debt. We feel that the pipeline companies themselves, with the help of public offerings, can get the equity. /42

Millard, when questioned by Rep. James Weaver (D-Ore), reiterated the two leading strategies for improved financing prospects. First, he recommended a "favored" status in ANGTS usage for project participants:

> I think most important now in the ANGTA legislation is the wholesale provision that any shipper of gas can avail himself of the facilities...without contributing to its construction, organization, and to all the problems which we are seeing today. /43

Second, he called for a reappraisal of the unconditional equity prohibition on producers:

> I would certainly not suggest that the oil companies, given their long record of a desire to stay out of all regulated industries, be allowed to participate in the managerial function, direct or indirect, in the [ANGTS].
>
> I think the word "equity," as Mr. McMillian suggested, is something which requires definition. We would not mind if they [producers] would participate in earnings beyond the limit of a simple bond interest. /44

Apart from the "free rider" and producer equity issues, there existed a third dimension to ANGTS's financing problems: absence of "tracking" provisions. Tracking, in the natural gas pricing context, was a regulatory grant in which gas development, sale and transmission "charges, both initially and on the occasion of any changes, were flowed

through automatically into the shippers' rates, rather than being reviewed in the course of general rate change proceedings for each shipper." /45 The concept was discussed in a subcommittee staff report on the ANGTS, which stated:

> In deciding whether or not to participate in financing on a nonrecourse [unguaranteed] basis, lenders will look both at the ability of the sponsors to complete construction and at the project's tariff arrangements. The tariff is a lengthy legal and operating document that defines how the company owning and operating the pipeline will charge its customers "the shippers" and what transportation services will be provided by the company. At a minimum, tariff arrangements are expected to provide sufficient dollars to cover debt obligations under each and every circumstance.
>
> FERC approved the cost-of-service tariff applications of both [Alaska Northwest] and Northern Border which allows them to automatically pass along costs associated with operation of the pipeline without prior approval by FERC. The key issue is the extent to which the shippers will be able to "track" or pass the costs along to local distribution companies and ultimately to end users. The obstacle to perfect "tracking" by the shippers of all legitimate charges is the separation of regulatory authority between FERC and the state utility commissions. Under normal operating conditions all transportation costs could be expected to be passed along to the end user. However, a question remains as to whether or not the individual authorities will approve agreements requiring pass-through of costs, particularly debt service, during periods of service interruption. /46

Without tracking, a return on investment was not guaranteed. Individual shippers would each have to defend development, sales and transport costs before state commissions, perhaps less sympathetic to national initiatives, more vunerable to local ratepayers, and responsible for controlling costs. In the end, they might not be permitted to market the gas at its true cost. Tracking insured that all legitimate costs would almost automatically be transmitted through the delivery system to the end user, hence more completely assuring investors of their return.

Although it appeared, in October 1979, that the FERC might be inclined to approve tracking for the project, it made no clear policy statement to that effect and offered no idea of how tracking might be operationalized in the ANGTS instance, and would not until May 1982. Pierce and McMillian, in their testimony, both encouraged swift action on this issue.

A fourth and final aspect to the ANGTS financing problem was Alaska state reticence to become involved. McMillian, praising the cooperation of the state's governor and its Congressional delegation, helped pinpoint Alaskan opposition for the subcommittee:

> We think that in the [state] senate, some members have been fairly responsive...and supportive.... The [state] house is another question. It is mainly...that we always hear, we cannot get this through the house. [House members often argue that] we do not want to go first [in committing to the project]. We try to explain they will not be going first but we do need some kind of commitment from them. But the main point...of delay is the house rather than either the senate or the Governor's office. /47

Robert H. Loeffler, of Morrison & Foerster, the state's counsel, advised the subcommittee later that afternoon that "the State of Alaska supports the construction of an Alaska gas pipeline and supports the construction of the pipeline by the Northwest Partnership along the proposed route." /48 Representing Gov. Hammond, Loeffler noted that "we [state administration] are in the process of seriously considering the various choices for financial participation by the State in the pipeline project."

> The state has been criticized for not coming forward with financial support for the pipeline. We believe this is not a fair statement of what occurred. /49

The Alaskan position was familiar and, based upon events of the previous year, predictable. First, the revenue bond proposal made by NWA was adopted almost immediately, Loeffler observed, thus creating the Alaska Gas Pipeline Financing Authority. While the authorizing legislation required a series of amendments to activate it properly, the entire operation was blocked by the Internal Revenue Service, which had to afford tax-exempt status to project bonds before they could expect to generate any funds. NWA, by Loeffler's reckoning, was making little effort to bring about this development. The proposal's companion element, the $500 million in convertible debentures, was solicited without any security, he claimed. "No responsible governmental body could have committed that much money on so little information in so short a time." /50

Second, "we need much more information before any intelligent decision can be made on" regular equity participation. /51 Alaska, like any conscientious investor, was not willing to obligate funds to a project without examining its portfolio.

Third, FERC assigned responsibility for the $2 billion conditioning plant to the producers, Loeffler maintained, and dictated that it must be constructed at the wellhead (Prudhoe Bay). "This," he stated, "Alaska believes is wrong." /52 The gas sales contracts alluded to above were now in jeopardy because they passed conditioning costs on to the purchasers, contrary to the President's Decision, which placed them with the producers. Alaskans, Loeffler said, hoped to locate the conditioning plant in Fairbanks, where it could help generate new petrochemical development. FERC's insistence on Prudhoe Bay, in light of the state's

open preference for Fairbanks, hardly rallied enthusiasm for ANGTS financing in Juneau. In fact, FERC's slow, "piecemeal approach to the [regulatory] issues," Loeffler contended, "...has increased the separation of the producers and the State of Alaska from the project and already engendered one court suit [on pipeline size and pressure] and prospectively another on conditioning costs." /53

His final observations were directed at the Decision.

> The President's Decision seems to have overlooked the requirement commonly [associated with] large loans that the lenders are assured controls over management to protect their investment. By separating the loaning of money from the necessary oversight necessary to protect the loans, the Decision has created an artificial separation between the pipeline and the producers.
>
> It is an encouraging sign that representatives of the White House and the Department of Energy have been sponsoring [consultations among the various participants toward] the development of a feasible financing plan. This effort, however, will be doomed to failure unless everyone takes a realistic approach to the problems of constructing this pipeline. The parties cannot say that the President's Decision settled issues which it has not settled. Nor for that matter can the President's Decision be viewed as the Ten Commandments of this pipeline. Modifications will be necessary and if this administration and the country really want an Alaskan natural gas pipeline, there must be an effort to develop a financing plan that is...not guided by out-of-date concepts on financing. /54

Sproul and Pyle offered the first day's final statements. Sproul, a PG&E executive who served as PGT board chairman, expressed great frustration with federal regulatory delays on the West Leg's relatively simple prebuild sections. Runnels, scanning Sproul's written testimony, identified two critical passages:

> We [PGT, PG&E's project subsidiary] are still tied up in hearings before the FERC for the 160 miles of western prebuild, even though these facilities are simply a portion of the same facilities that were authorized by the President and conditionally certificated by th FERC almost two years ago in December, 1977. /55

"Why they are still tied up in hearings is beyond me," Runnels responded. He then read the second passage:

> We are still waiting for the issuance of a final right-of-way permit from the Department of the Interior to allow us to cross the three miles of Federal lands - out of the 160 mile total - that are involved in the western leg prebuild proposal. /56

"Whoever is sitting on that either ought to be fired or chased off if he does not get about his business," Runnels observed. "I think it is ridiculous. We will try to do all that we can to expedite some of the bureaucracy that is holding up the western leg.... I think this is why private business becomes frustrated." /57

Clausen, following up on Runnels' questioning, asked Sproul if he "believe(d) that FERC actually has exhibited a degree of understanding and cooperation toward expediting this prebuild process?"

> Mr. Sproul: No sir; I do not....
> ...[I]t seems that they do not exhibit the same sense of urgency that we are trying to communicate. Perhaps they do not believe us, that we have to do these things in order to get people in the field next year--to buy the pipe, to do the planning, to get the final engineering done. But we have been before them now for some time. /58

Daniel E. Gibson, PGT's general counsel, suggested that the West Leg's association with ANGTS, far from expediting review as they had initially hoped, was actually prolonging it. He observed:

> I must say I do not understand why it should take as much time as it does, but you have to understand it in the context of the way government is approaching it.
> The Department of the Interior has looked at the matter [from] the point of view [of first] developing terms and conditions for the entire [ANGTS] right-of-way permit. As Mr. Sproul indicated in his testimony, one of our ironic litle tragedies on the western leg is that just because it is a part of the [ANGTS] the initial reaction...is, well, it must be just as complicated as any other part of the Alaska system, therefore, we should apply the same terms and conditions to it. /59

Pyle, project manager for the Northern Border Pipeline Company, the East Leg sponsor consortium, briefly discussed that partnership, its proposed route and, most importantly, the urgency of the prebuild to the overall success of the project. A major advantage of the East Leg prebuild, which comprised 809 miles of pipeline at a cost of $1.5 billion, "is that it has been viewed - and I think accurately so - as being the guinea pig for various new procedures which are going to be applied to the Alaska [and northern Canadian] sections," Pyle explained. /60 Since the West Leg prebuild was so modest, the East Leg would be the first real testing ground for the "one-window" review concept and many of the OFI's other regulatory innovations. As Pyle remarked:

> Unlike the western leg, we will be under the incentive rate of return.
> We will be under the cost reporting system to the Federal inspectors and will have to institute the inspection program and en-

vironmental training required under the President's Decision.

We will have to comply with EEO and MBE requirements as described in the President's Decision.

And we have a new one which has recently come up, which is the procurement practices being negotiated between Canada and the United States, making each of the sponsors bid competitively, both to the United States and Canada, to give both of these countries a fair competitive system on supplying goods and services. /61

Runnels asked Pyle if he had "the same feeling that Mr. Sproul had, that you have been had by being associated with the difference between building the pipeline in Alaska and one in the lower 48?" /62

Mr. Pyle: We feel we have been painted with the same brush....

In my opinion, we feel the [East Leg preliminary] project review would have gone quicker and simpler if we had not had the additional regulations [imposed due to the ANGTS connection]. /63

The first day of testimony closed with the subcommittee members impressed with at least two arguments. First, ANGTS faced serious financing difficulties, given the financing strictures imposed by the Decision, high interest rates and the reluctance of the State of Alaska to participate in the project. Although McMillian had not, as yet, formally requested any specific legislative remedies, it was beginning to appear that several might soon be required. Second, committee members - many of them critics of broad federal regulation - were advised by the ANGTS sponsors that slow federal reorganization had delayed, rather than expedited, project initiation. Formulation of the new arrangements, they predicted, had taken more time to establish than they would later save during review and construction.

Rhett, as the first witness on October 16, advised the subcommittee that the government's early deficiencies in ANGTS review and oversight were not attributable to the reorganization per se, but instead to a failure to implement it quickly. Translation from the OFI idea to its reality had taken far longer than expected and, although now well on its way, was still incomplete. For example, the West Leg prebuild review that Sproul had criticized was being governed by the original, unconsolidated processes, associated with TAPS oversight and not the new OFI procedures. The OFI's "one-window" review, for example, conceived to overcome regulatory delay, was just now becoming operative.

Rhett's testimony, on the whole, was encouraging, especially when compared to the previous day's discussions. Briefly, Rhett summarized his project orientation, his initial organizational measures and his early oversight activities, as described earlier. The recurrent theme of his prepared statement was preparation and facilitation. "The major thing that I do want to emphasize," he told the panel, "is that we are concentrating on trying to clear all the roadblocks early." /64 "A number of surprises will undoubtedly occur in Alaska during construction,"

he added later, "and I do not want the Federal Government's actions to be one of them." /65 He continued:

> While in Washington, I have spent time with representatives of various groups and through these talks I have gained a valuable understanding of [their perspectives]. I have also come to understand that achieving a balance between these interests will not always be easy. Yet, as Federal Inspector, I am prepared to fully accept my responsibility for determining how competing interest will be balanced and for accomplishing this in a fair and responsible manner. /66

Rhett was followed by James W. Curlin, an Interior deputy assistant secretary with ANGTS responsibilities, and Charles B. Curtis, the FERC chairman. Curlin's statement outlined the grants of right-of-way and the ANGTS alignment and emphasized the difficulty of reconciling a highly sophistocated regulatory mission, implied by the right-of-way grant, with the ANGTA's expedition imperative.

> ...[T]o be perfectly blunt, we do have a problem within the Department of the Interior in balancing the objectives of several of the statutes which we have to work with. One of these, of course, is the Mineral Leasing Act under which the right-of-way grants are made, and the second is the expedited processes of the [ANGTA] which we are discussing today. /67

Right-of-way allowance, by law, required careful prior consideration of several issues: air and water impacts, other public health and safety hazards, the quality of life of the individuals living along the right-of-way path and prospects for restoration and revegatation of the area. A grant, Curlin stated, simply could not be allowed without compliance with these considerations, ANGTA notwithstanding.

> Now, it is expected in a 4,000-mile pipeline right-of-way project that there are going to be both [climactic extremes] involved and some extremely difficult engineering and environmental problems to be resolved, particularly in the construction through permafrost. It is not exactly what you call state-of-the-art technology, [and] each and every turn can bring surprises. /68

The five-year West Leg prebuild delay, decried the day before by Sproul, could be attributed to two factors, he noted. First, the President's Decision was not issued until the fall of 1977, thus precluding any regulatory action until that point. Second, "the [original EPB, led by Martin and Fearnsides]...had made a decision that it wished to make the stipulations as uniform as possible among all of the legs of the pipeline," he continued. /69 This was emphasized in Curlin's written testimony:

> Today, most of the major areas of conflict for the Right-of-Way

> grants for the Eastern and Western legs have been resolved within the Department of the interior and we expect to issue these grants in November 1979. The PGT grant could have been issued earlier, but the integrated approach implicit in the Act and the President's Decision has prevented issuance of a grant for one leg until we have reasonable assurance that the major issues involving any of the three legs have been settled. /70

"Therefore, to get uniformity," the formulation of stipulations involved a much more complex process than normally required for so small a right-of-way. Curlin did assure the subcommittee that "these stipulations have now been developed" and "we are ready to move forward" now. /71

Curtis, the FERC chairman who had become the commission's ANGTS operative after Don Smith's departure in late June, told the subcommittee "we believe we have now completed action on the principal decisions required of us to permit the sponsors to formalize and complete project-financing plans." /72 The three decisions, as noted earlier, involved the IROR, pipeline size and pressure and the NGPA, in which Congress set a price ceiling for Prudhoe Bay gas and authorized "rolled-in" pricing for sale with less expensive gas.

The commissioner, acknowledging complaints about FERC's slow and cumbersome regulatory posture, characterized as "justifiable" Congressional and private sector concerns that "the agencies of Government are incapable of responding promptly and expeditiously to render decisions on essential energy projects...." /73 However, Curtis, like Curlin, noted the administrative dilemma that legislative guidance had imposed upon him:

> [The FERC's ANGTS record] reflects the rock and the hard-place type of position that the Commission finds itself - both giving an opportunity for this evolutionary negotiating process to take place among the various persons who have direct and substantial interest, and at the same time, carrying out the [ANGTA] statutory direction to make decisions necessary to get essential elements in place to permit this project to be financed. /74

Rep. Pat Williams (D-Mont), in a rare accolade for bureaucratic machination, said that, apart from the critics of federal oversight, he had heard many "other voices":

> Those other voices are in the vast majority, and they say unquestionably that while they want to cut through the regulations and the restrictions and the redtape and the judicial delays which [hinder implementation], they do not under any condition wish to return to the "good old days" when industry alone decided its convenience and necessity and the public was left out of those decisions. /75

On "more than one occasion," he added, "I noted [from prepared FERC testimony] that...the sponsors of the project have asked for delays." Curtis said that this was true, "but I must admit that a fair statement would be that the project sponsors continually urged the Commission to adopt a decision pace that was more ambitious than the Commission was finally able to conclude." /76 Curtis, like Rhett and Curlin, pledged to attend ANGTS matters as quickly as possible, consistent with his standard regulatory responsibilities.

It was perhaps unreasonable to expect that OFI reorganization would immediately streamline the processes of government in the initial stages of the ANGTS. The readjustment of a sensitive political process was bound to involve time and trouble, at least in its first instance. The mere formulation of the OFI idea and the aggregation of its responsibilities, by both the executive (Decision) and legislature (reorganization plan), had expended considerable time and energy not required under standard review provisions. In fact, it is somewhat remarkable that departmental approvals and OFI initiation came as quickly as it did, given the predictable ponderousness of presidential and congressional deliberation, the conflicting missions imposed on the bureaucracy, pervasive departmental jealosies, the engineering and financial complexities of an immense, pioneering construction project and the inevitable "growing pains" associated with the founding of any new federal agency.

Subcommittee members, discouraged by the sponsor complaints the first day, were probably encouraged by Rhett, Curlin and Curtis, who testified the second day that a fast regulatory finish was now possible. Several problems, however, would not go away. First, the new regulatory arrangements were certain to produce new regulatory snafus. Although, as Curlin and Curtis had observed, the two major departmental grants were near issuance, the OFI had yet hardly begun its oversight tasks. Second, and most critical, financing remained under a cloud, one which perhaps even legislative action, in the form of ANGTA waivers or federal government loan guarantees, could not lift.

Perhaps no one followed the ANGTS financing issue more closely than Arlon R. Tussing, an Alaskan economic analyst who, while a congressional committee consultant on Alaskan energy development in the mid-1970s, was credited with originally suggesting the Alaskan Highway route to AGTL and Foothills' executive, Bob Blair. /77 Tussing advised the Alaska State Legislature on ANGTS in a series of papers, usually co-authored by Connie C. Barlow and written under the auspices of the University of Alaska's Institute of Social and Economic Research, where Tussing was once employed.

As early as January 12, 1979, in his first analytic paper, Tussing argued that the ANGTS project had reached an impasse. "What is holding up the [ANGTS] project," contrary to sponsor contentions at the hearings, "is not the scheduling of a host of individual events - incentive rates of return, conditioning costs, gas sales contracts, etc. - but a resolu-

tion of the basic question of who will bear what risks, and in return for what benefits?" /78 As he observed:

> None of them [project principals--sponsors, federal agencies, producers, the State of Alaska]...regards itself responsible for the success or failure of the venture, and each is waiting upon the actions of the other. /79

How had this impasse come about? Tussing argued that the Alcan sponsors, with their original proposal, "made the President," then considering his ANGTS options, "an offer that was very difficult to refuse." In the Decision, Carter took NWA's optimistic claims on private financing at face value "and gave Congress the assurances it hoped to hear...."

> [T]he project sponsors and the Administration hooked Congress--and themselves. Their failure to address the financing question openly and realistically from the beginning has sowed seeds of suspicion that could well prove fatal to the project, or at least to its present sponsors [NWA, in particular], when and if they finally decide to ask for federal help.... /80
>
> In short, the Alcan sponsors, in order to get their project chosen [over Arctic Gas and El Paso, which acknowledged that some governmental assistance might be required], offered the FPC and the President the optimistic financing forecasts they wanted to hear; the President, in order to get his choice approved, told Congress what it wanted to hear. /81

Under optimal circumstances, a private coalition might have been successfully forged to finance the ANGTS. And he defends the Alcan idea and routing scheme as technically and politically superior to any of the four original proposals that came before the FPC and Canada's National Energy Board (NEB) in 1976. It was, he maintained, "the only one that would have the remotest chance of success today." /82 However, as a result of Alcan's early and confident assurances of private financing:

> ...Northwest seemingly accepted an obligation to exhaust all possible efforts to put the project together without loan guarantees, price supports, subsidies, or innovative tariff provisions, before any of these measures could even be considered again. In our judgment, however, this charade has now become a waste of time, effort and money, and the longer it goes on the more it will erode the sponsors' credibility and that of the project concept itself. /83

If one does not subscribe to Tussing's thesis that private financing was probably doomed from the outset by limited available consortium resources, other reasons, including a changing gas market structure, appeared to threaten "free market" financing by 1979, two years later. "Instead of a growing gas shortage," he explained, "the United States

is facing at least a short-term surplus" and may have reached, in any case, the upper limits of gas demand. /84 Furthermore, with increases in Canadian and Mexican gas availability, both at prices lower than Alaskan gas projections, "Alaska gas may not be economically competitive or needed at least until several years after the planned completion date of the pipeline." Finally, there was "far less conviction among energy experts" that the world would face a crude oil shortage in the 1980s, as feared only a few years before. All these issue, Tussing claimed, suggested a financing impasse.

> Both parties [the sponsors, led by McMillian's NWA, and the Carter administration] are damned if they do and damned if they don't: the project is essentially stalled, but if the sponsors now admit that the line might not be built without government help, many members of Congress will believe (as indeed they may already believe) that Northwest and the President deliberately and systematically misled them about the need for federal support [just to assure Alcan commissioning]. /85

In a subsequent report, published in April 1979, Tussing and Barlow tried to formulate a way out of this dilemma by defining the requisites of a viable financing plan. /86 Their alternative strategy, very similar to the Treasury Department's original 1977 recommendation to the President on ANGTS financing, presupposed that "the Alaska Highway gas pipeline cannot be financed and built unless the United States government guarantees at least part of the project debt." The authors explained:

> This judgment...is held almost unanimously by the natural gas transmission industry, Alaska gas producers, investment bankers, lending institutions, state and federal regulators, and concerned members of Congress. The only significant dissent we encountered in more than six months of investigation came from a few top officials of the United States Department of Energy and from Northwest Alaskan Pipeline Company [NWA], the project's principal sponsor. /87

The Tussing-Barlow plan may be summarized in five points:

1 Financing guarantors must, under a scheme of fully and specifically apportioned risk, include all major parties involved in the project: NWA and other project sponsors, Prudhoe Bay producers, Alaska gas shippers not involved as ANGTS sponsors, the State of Alaska, the government of Canada, natural gas consumers and, as guarantor of the last resort, the United States government.
2 The sponsors must assume risk commensurate with their expected benefits. Under the present scheme, "the sponsoring companies themselves plan to bear no risk whatsoever beyond their paid-in equity," a fact that hardly stirred enthusiasm among others solicited for debt financing. /88 NWA, in Tussing's words, "expected a 'free ride' on debt that they were asking the producers to

guarantee."

3 A project leader, preferably a "respected senior public official who is intimate with both government and finance, independent of any other administrative or policy responsibilities," must be appointed to facilitate the project at the highest levels of decision-making. /89 The authors suggested, as possible candidates, Bob Strauss, then National Democratic Party chairman, or Vice President Mondale, who already held line authority over Rhett and the OFI. Mitchell Sharp, Canadian NPA commissioner and a leading Liberal politician for over a quarter of a century, appeared to fit the "project leader" description as Tussing envisioned it.

4 "Each party's exposure must be so limited that the worst plausible combination of events would not wipe it out or seriously debilitate it." /90

5 The financing plan must be constituted at once, in simultaneous consultation among all guarantors, as to minimize gamesmanship. The project's financing impasse, Tussing and Barlow claimed, was produced in part by NWA's incremental approach to fund solicitation. It tended to discourage initial commitments, the authors believed, since most parties were reluctant to make their "best offers" before others had done so.

The "project leader" concept beckoned back to the very first notion of the Federal Inspector, that of a "statesman-advocate" attending the strategic political aspects of the ANGTS rather than its day-to-day construction management oversight, as assigned to Rhett. Rhett, as Federal Inspector, occasionally served in the project leader role, but on the whole lacked the legal authority and political eminence which Tussing seemed to suggest. He was singularly qualified as a government construction project manager, but had little taste (if some talent) for bureaucratic entrepreneurship or strategic political maneuvering. This may account for his great appeal to Schlesinger and the Congress, as they, much like the leading ANGTS departments, wanted a Federal Inspector who could capably manage the technical aspects of project oversight but would not encroach upon their own authority on the major political issues.

Tussing implied that while each federal actor - the Congress, the President (through Schlesinger), Rhett and, to a lesser extent, the leading ANGTS departments (DOI and DOT, in particular) - had a share of the action, no one could easily consolidate enough of it to be an effective broker or catalyst on major preconstruction project issues which might bring financing. While the federal government, with the Federal Inspector and the OFI, had consolidated its oversight responsibilties for construction, it had failed, by Tussing's account, to combine its overall leadership authority, which was splintered among these major government actors. This fragmentation, according to Tussing, precluded the concerted federal action necessary at the highest levels to facilitate the project at the critical early stages.

Of course, even with full implementation of the Tussing-Barlow plan, including the recruitment of a "project leader" of Mondale's standing, ANGTS prospects remained very uncertain due to the transformation of the gas market structure and the rise in interest rates. As Tussing wrote:

> There is a very real chance that the Alaska Highway project may be scuttled or at best put on the back burner. The government may well decide that the gas is still needed - but that it is not needed now. Any among a host of reasons [limited demand for high-cost gas, new Canadian and Mexican imports, increased domestic supply due to deregulation] can provide the federal government with convenient (and even sound) pretexts for avoiding the unpleasantness of invoking consumer or government guarantees to rescue a huge and ailing project. /91

Nevertheless, if the federal government wished to promote ANGTS (and there were reasons why it should not), its fractured leadership over the project would have to be strengthened and joined. Government would have to bring to the upper reaches of project decision, Tussing claimed, the same discipline and coherence that Rhett, as a Federal Inspector candidate, would bring to project's design and construction review. This would not be easy, he implied, given the strong incentives for narrow self-interest, but there was no alternative.

The Tussing-Barlow papers hung like a dark cloud over the bright optimism that still characterized informed opinion on ANGTS prospects. Tussing, one of many voices in the crowd, saw as half empty the glass which others saw as half full. Most project principles still believed, as the new decade turned, that financing would come for the Phase II Alaska Leg. But there were signs of trouble ahead. First, and perhaps most importantly, the gas market structure in the United States was changing, and these changes did not bode well for ANGTS development. Second, even if ANGTS retained its economic viability or if "national security" arguments overwhelmed economic considerations, it appeared that financing would be assured only after consolidated, forceful federal leadership was provided to the project and after some substantial underwriting guarantee of project costs was granted - two bold strokes which would not likely be forthcoming.

And these developments would not come, at least not while the window of ANGTS opportunity remained open. Perhaps, as Tussing had maintained, existing institutional arrangements frustrated attempts to correct the project's deficiencies. Government had made a major stride with the OFI innovation, which promised to enhance oversight during design review and construction, but it had stopped short. No "project leader" existed to promote ANGTS or to champion amendment of ANGTA and Decision provisions which undercut financing. The producers, barred from equity ownership by law, were disinclined to participate without any share of authority while gas shippers, due to the "common carrier"

rule and the Alaskan Northwest partnership structure, had insufficient inducement to join the sponsor consortium. The Alaska state legislature held a veto over the governor's willingness to enlist.

Obviously, the ANGTS government and sponsor principals believed that financing could still come under the original provisions, without substantial legal changes. Therefore, perhaps the need for dramatic intervention - such as that suggested by Tussing - simply was seen as necessary. This was Millard's contention at the Runnels' hearings. NWA, DOE and a few investment houses also held this conviction, at least officially. Leading OFI officials, including Rhett, maintained, as as late as summer 1982, that the original plan, after modification by the 1981 ANGTA waivers, would finally turn the trick.

Perhaps the ANGTS required another jolt equivalent to the Arab oil embargo of 1976 to give the project new impetus, a second life. Governmental participation as the ANGTS guarantor, a last-resort insurer of more than $20 billion, was likely to find legitimacy only after, and probably only immediately after, a significant political or economic shake-up. Of course, under such circumstances, market alteration might enable the private sector to arrange financing without governmental assistance. Nevertheless, the oil embargo's "energy crisis," in public policy terms, was spent by 1979; the impetus for massive federal involvement had passed.

Or perhaps the Carter administration, its energy offensive stilled, and the Congress, anxious to ease off energy policy now that the supply outlook was getting brighter, were willing to continue marginal support for ANGTS under original rules but, for the reasons listed above, refused to go any further. After all, if the private sector had, by its reluctance to provide financing, labeled ANGTS a bad risk, why should the federal government underwrite it? With the prospect of increased gas imports from Canada and Mexico, new domestic discoveries and less reliance on foreign oil, the nation's security appeared less vunerable to Middle East shocks. U.S. commitments to ANGTS, in its dialogue with the Canadians, always stopped short of government guarantees. The government, Rhett himself once observed, was not wise to take heroic measures to save a cause that was, perhaps, better lost.

It was discernable, as early as late autumn 1979, that the ANGTS, despite the prevailing optimism, could indeed flounder and fail. Although the policy impasse would be broken with ANGTA waivers in December 1981, the correctives would prove insufficient, given the new gas market structure. A financing package would not be forthcoming.

The OFI Hits Stride

Rhett, although as preoccupied with ANGTS financing difficulties as other project principals, continued his central task of building an organization to review project plans and oversee pipeline construction, once ANGTS money became available. Between January 1980 and October 1981, the OFI would hit its stride. In terms of organization, staffing would be completed under the guidelines of a new organizational design. Major contracts for technical assistance and automation support would be let and contract personnel would quickly take the field. FIMIS, the Federal Inspector Management Information System, would be unveiled and, in part, operationalized. The OFI "organizational character" would be established.

FERC, usually in cooperation with OFI, would issue a variety of its major project regulatory approvals, allowing construction to begin on both American prebuild sections by spring 1981. The Department of the Interior, on December 1, 1980, would issue a right-of-way grant to NWA. Canadian relations would strain somewhat over the ANGTS, but construction on the Foothills prebuild, designed to deliver excess Canadian gas to the United States, would begin in August 1980, after assurances of American commitment by President Carter and the Congress.

OFI began its oversight responsibilities, particularly as they related to prebuild construction monitoring and NWA planning and design approval. OFI staff and contract personnel coordinated the permit process, reviewed cost estimates, analyzed sponsor right-of-way applications, monitored sponsor field research in Alaska and construction in the lower 48, screened major procurement actitivies and enhanced relations with other ANGTS parties, both governmental (local, state, federal and Canadian) and nongovernmental (corporate, citizen).

Finally, project financing, despite sponsor optimism, failed to materialize for the Alaska Leg, although bankers and other investors would quickly raise $160 million for West Leg and $1.055 billion for East Leg prebuild construction.

Organization

At the center of Rhett's organizational activity was the completion of senior staff appointments. As noted earlier, two AAOs, the EPA's Earl Kari and Bill Toskey of DOI, assumed major OFI line positions. Dick Berman, former Assistant to the Managing Director and a former auditing executive with ICC, was named OFI director of Audit and Cost Analysis and would later become the FERC AAO. He had major involvement in ICC's oversight of the TAPS. Toskey, a West Point graduate and former Army Corps officer like Rhett, was DOI's Alaska Pipeline Office manager when named OFI director of Permits and Compliance, providing supervision for the agency's "one window" permiting process.

The two remaining headquarters program directorships, Engineering Review and Environmental Review, would be filled in late summer 1980. The engineering office was taken over by William T. Black, a former Army Corps engineer who, after joining Woodward Clyde & Associates in 1962, had served as a chief consultant to Alyeska on TAPS. Few people knew more about the TAPS technical engineering experience than Black. A month later, Lawrence Birke was hired as Environmental Review director. Birke, an environmental consultant, had been executive director of the Northwest Pulp & Paper Association before joining OFI. These two offices, Engineering Review and Environmental Review, would locate in Irvine, California, where the Fluor Engineering Corporation, general contractor for the Alaskan segment, was based.

Of course, Hengerer as general counsel and Greenstreet as director of Administration already filled major headquarters support positions. Joyce Morrison, FERC's acting director of public information, was named OFI's supervisory External Affairs officer in late 1979. The Policy Analysis directorship would not be filled until 1982, and even then only temporarily. Apart from the Rector and Vance, the major appointments in Administration were William G. Laxton as OFI personnel director and Curtis S. Lackey as management information system (MIS) director. Laxton, EPA's deputy personnel officer, was hired in August 1979 and was widely regarded as one of Rhett's most capable administrators. Lackey, an EPA automated data processing manager, supervised MIS development for Greenstreet.

In the field, James Coan, former chief of energy development for DOI's Bureau of Land Management (BLM), assumed duties as director of the OFI Alaska Project Office in January 1980. Coan, along with supervisory engineers Robert Stuart and Kenneth Swanson and fish and wildlife biologist W. Lewis Pamplin, established OFI's presence in Fairbanks and Anchorage. The Coan team, well acquainted with the Alyeska project, quickly established a productive working rapport with the federal agencies which had monitored TAPS. Rhett, by locating the major OFI Alaskan presence in Anchorage rather than Fairbanks and by selecting Coan to lead his Alaskan office, signalled his feeling that OFI's most critical interface there, at least initially, would be with the ANGTS federal departments rather than NWA, the Alaska Leg sponsors who had headquartered in Fairbanks.

In April 1980, Amos C. Mathews joined the OFI team. Mathews, yet another West Point graduate and retired Army Corps officer, was highly regarded in Alaska, where he had served successively as Alaska State Pipeline Coordinator for TAPS and the State's director of Research and Development. Mathews took control of the Alaska Field Office and eventually became Rhett's Deputy Federal Inspector for Alaska. By 1981, after Coan's initial peacemaking between the OFI and the established federal agencies in Alaska, OFI's attention shifted to relations with the state government, the producers and the sponsors. Mathews was the ideal operative to orchestrate this shift, as he knew many of the

state's leaders in the pipeline, energy and construction industries and the state's top political and bureaucratic officials personally. He would provide Rhett, in Washington, with the "intelligence" the Federal Inspector required on Alaska energy and state governmental affairs.

To the south, Leo Bellarts, a mechanical engineer most recently western division head of the Naval Facilities Engineering Command, was named on March 16, 1980, to direct the West Leg Project Office in San Francisco. He would supervise PGT's construction activity. Dennis E. Schroeder, a young civil engineer who had served as a field representative to DOI's Alaska Pipeline Office during TAPS construction, was appointed, in late August 1980, to head OFI's Northern Border Project Office in Omaha.

At Rhett's request, OPM granted a reemployment rights prerogative to OFI recruits, which ensured that any federal employe resigning his post to join OFI had guaranteed placement upon return to his original agency. Given the liabilities associated with the agency service (short organizational life, shift to Alaska), the provision was necessary to attract experienced staff.

Rhett, however, was also able to entice bright junior staffers, such as Livingston, a Smith College graduate in her mid-twenties who had learned the budget process under Billy Cramer while on the OFI-OMB task force. Another young recruit was Figel, a 24-year-old engineer fresh from the University of Rochester and the FERC. Figel devised and maintained the project's cost-of-service computer model and would, under Lackey's direction, supervise the development of FIMIS, the agency's comprehensive management information system. There were many others, mostly drawn from EPA, FERC or Interior. All in all, the quality of OFI staff, if measured by new appointments received after the agency's reductions-in-force, appears quite high. Nearly all OFI employes found placements with other agencies at or above their OFI grades. Many, such as C. Allen Olson, Vance's deputy and eventual successor as OFI contracts director, rose to positions of increased authority and responsibility upon leaving OFI.

Staff grew steadily from January 1980 until mid-1981. That January, 35 OFI employees had been recruited, nearly all in Washington. In six months, staff would double to 74, 16 of whom were scattered between three field offices. By September 19, 1980, about 14 months after OFI opened its doors, OFI personnel numbered 108 people, including 34 in the field. In July 1981, OFI would reach its manpower peak, 142 full-time employes, supplemented by a part-time staff of about 20 persons, and over half stationed in Washington. Of the full-time employes, 68 were located at the following field locations: 26 in Alaska; five in San Francisco; 26 in Irvine; 10 in Omaha and one in Denver. (See FIGURE 3-2.) Afterward, due to continued uncertainty over project financing, hiring would cease and, as we shall see, several reductions-in-force would be instituted.

FIGURE 3-2: OFI Staffing Trends

Date	Employes[1]	Minorities (%)		Women (%)	
		Total	Professional	Total	Professional
September 1979	25	-	-	-	-
December 1979	35	29%	14%	-	-
March 1980	51	31%	15%	51%	27%
June 1980	74	27%	14%	45%	27%
September 1980	98	27%	15%	47%	24%
December 1980	112	26%	18%	47%	26%
March 1981	118	26%	19%	46%	26%
June 1981	142	25%	18%	46%	23%
September 1981	138	25%	19%	44%	19%
December 1981	138	26%	20%	44%	21%
March 1982	137	26%	20%	44%	20%
June 1982	127	25%	18%	45%	22%
September 1982	89	28%	19%	43%	17%
December 1982	83	29%	20%	43%	18%
March 1983	69	25%	19%	43%	21%
June 1983	41	20%	12%	49%	16%
September 1983	26[2]	17%	6%	46%	19%
December 1983	23	-	-	-	-
March 1984	20	-	-	-	-

1 Permanent full-time employes (FTE)
2 Total includes two full-time temporary employes.

Sources: OFI Quarterly Reports

Rhett and Cook, by the end of autumn 1980, decided to reorganize the OFI to release Rhett from so much subordinate oversight and to utilize Mathews' expertise in Alaska and Cook's administrative skills in Washington. The new organization design, operationalized by December 1980, created a new level of intermediary supervision at the top. It promoted both Cook and Mathews to deputy federal inspector (DFI) status and divided organizational jurisdiction among them according to geographical location, managerial expertise and individual interests. (See FIGURE 3-3.)

Cook, as DFI-Washington, officially took command of all headquarters support offices, two headquarters program offices (Audit & Cost Control and Permits & Compliance), the San Francisco (West Leg) Field Office and the Omaha (East Leg) Field Office. Mathews, the new DFI-Alaska, administered Alaskan operations from his office in Anchorage, supervised both Irvine program offices, Engineering Review and Environmental Review, and the Alaska Field Office, shifted closer to the action in Fairbanks. In another important organizational modification, John L. Alexander was hired as senior staff in May 1980 to direct a new Equal Employment Opportunity/Minority Business Enterprise (EEO/MBE) office. This office, which would include as many as six people, would study sponsor plans to assure ANGTA and Decision requisites for minority and native hiring. Rhett, as noted above, was most sensitive to this issue, particularly since Jackson had placed so much emphasis on it during the Federal Inspector's confirmation hearings.

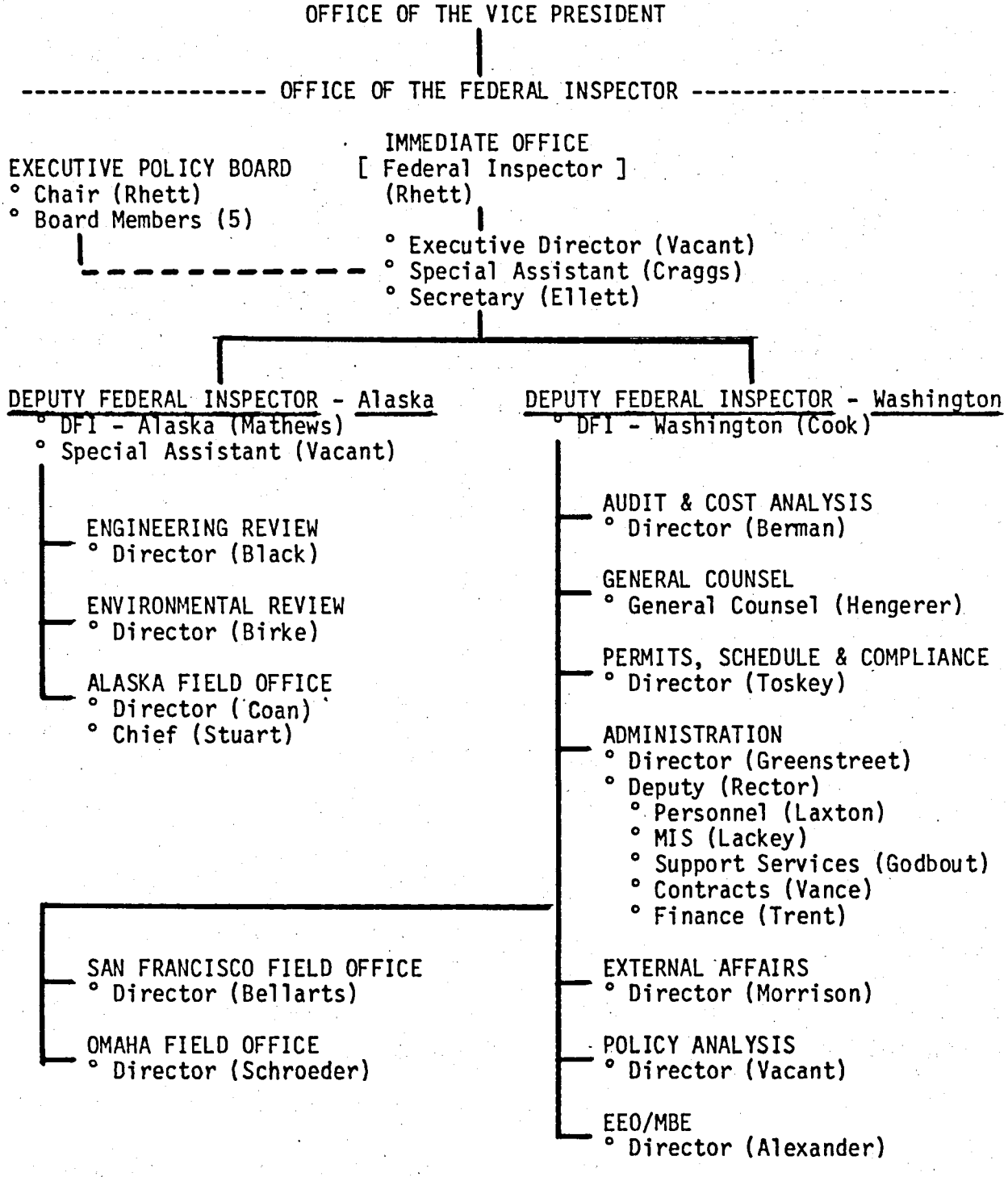
The OFI did not always run as simply or precisely as the new organization chart might suggest. As with any organization, there existed certain operational peculiarities fundamental to understanding how the OFI really worked. First, and perhaps the single most important aspect of understanding OFI organization and administration, is an appreciation of Rhett's constant presence. Although officially free of many routine supervisory tasks, Rhett would still involve himself in many aspects of day-to-day agency management.

In fact, no aspect of OFI business was too small or too remote for his personal attention, should he decide it was required. This kind of involvement was particularly apparent in Administration, which was a center of agency activity in the preconstruction period and, by Rhett's reckoning, a focus of many of the OFI's problems. Rhett considered this occasional "micro-management" as a privilege of his own authority and it was not always welcomed by senior staff, who sometimes felt that the Federal Inspector was usurping a prerogative of their own appointment. Rhett did not wish to step on toes below, but he would not hesitate to do so, either directly or through Cook, when affairs were not being conducted as he wished.

Why did Rhett become so involved? Perhaps, as he claims, circumstances did compel his intervention. First, there was some inexperience among senior management staff, although many junior officers, such as

FIGURE 3-3: Final Organization Design

Developed by Rhett and Cook
Internal Organization Initiative
Autumn 1980



Source: OFI Transition Book
"Summary of Project and Office", p. 14

Laxton, were rated very highly. Additionally, some offices, administrative divisions in particular, did appear to have chronic problems. Finance, for example, failed to establish a satisfactory invoice system and MIS, after the Touche Ross studies, was not able to fashion and implement a FIMIS contract as quickly as possible. Second, inherent organizational problems, such as dispersion of staff and the requirement for smooth interagency relations, seemed to demand his attention to details. Finally, Rhett may have turned inward because there was little he could do presently to effect events, such as financing, on the outside. His most important contribution before Phase II construction, as he saw it, was to supervise East Leg building, to provide "good offices" until the Alaska Leg financing breakthrough and begin preparation for Alaskan construction oversight.

A second OFI operational peculiarity was more subliminal - an internal institutional tension between regulatory and advocacy responsibilities. The OFI's peculiar split mission, which mixed both enforcement and facilitation, was not easily reconciled, particularly among former EPA or FERC types, who often had developed strong regulatory orientations in previous organization associations. However, at least for Phase I, this tension did not appear to trouble many OFI activities, perhaps because Rhett and his senior staff were so persuasive in promoting the need for "balanced evaluation" in project decisions. The Phase I prebuild, in any event, was largely a standard pipelining exercise which perhaps deemphasized many of the hard regulatory/advocacy issues which might arise in Alaska.

Hengerer, OFI's general counsel, reflected a full appreciation for Rhett's philosophy of conditioning regulatory action with its probable consequences for project schedule and costs. Perhaps due to his own service as an industry attorney, Hengerer was highly sensitive to the burden gas regulation imposed on the sponsors. ANGTS, he believed, required incentives as well as prohibitions if it was ever to be built, and government's "proper" response to initial noncompliance was not always punitive. As the government had a responsibility to act on behalf of the public, Rhett argued and Hengerer agreed, it also had a like responsibility to act quickly and reasonably on behalf of the sponsor.

Naturally, there remained perceivable differences in regulatory demeanor. Some OFI staffers, such as Pamplin, were sympathetic to Rhett's charge, but still disinclined toward any activity which might risk environmental damage. Perhaps no one, at least from a theoretical standpoint, faced this regulatory/advocacy tension more squarely than Berman, as OFI's cost and audit official and FERC's AAO. Berman, conceptually, was lodged between the rock of his OFI duties, which emphasized "balanced evaluation," and the hard place of pure FERC regulatory enforcement. His perceived dilemma was particularly aggravated by his authority over costs and rate base, perhaps the most volatile of all ANGTS prebuild issues.

Berman's job, of course, was to audit, monitor and evaluate the cost and status of construction on all ANGTS legs and to effectively implement and maintain the IROR mechanism for the East and Alaska Legs. His early responsibilities, in design review and approval of the Certification Cost and Schedule Estimate (CCSE), would have profound affects on subsequent rate base determinations. Berman understood the potential difficulties derived from his "two hats," in being responsive to Rhett's concerns while maintaining FERC's regulatory integrity. The precariousness of his position encouraged him to stay close to regulatory precedent and the temper of recent FERC opinions in his project reviews and decisions.

The self-segregation of DOT's agency authorized officer was a third operational peculiarity of OFI organization. Earlier, it was noted that Toskey, DOI's AAO, EPA's Kari and later, Berman, the AAO for FERC, were appointed to major OFI posts by Rhett. The DOT AAO, Lloyd W. Ulrich, in fact, was the only major AAO unsuccessfully recruited by Rhett for a critical OFI program office. According to Ulrich, DOT's leading ANGTS officials, L.D. Santman and Howard J. Dugoff, senior executives in the department's Research and Special Programs Administration, decided that DOT's pipeline safety mission would be better enforced by an AAO without organizational authority in the OFI. "We discussed it [staff integration] at great length," Ulrich explained, "but we didn't think it would work." /92

DOT officials conceded Rhett's ability and willingness to enforce DOT's safety responsibilities, but still believed that their counsel would best be provided by a source organizationally segregated from, if associated with, the OFI. To this end, they created DOT's Alaska Pipeline Project (APP) office, and Ulrich, a departmental TAPS expert, was appointed as its director. While Ulrich's office was collocated with the OFI, which quickly settled in the Post Office Building (1200 Pennsylvania Avenue, N.W.) at Federal Triangle, he had no formal OFI line authority. He served solely as advisory staff to the Federal Inspector on DOT's pipeline safety imperatives.

The DOT idea of an organizationally independent AAO was fully consistent with the original OFI organization plan, as developed by Donahoe and Cramer at OMB. It did, however, run counter to Rhett's objective of enlisting all major AAOs. Rhett intended the OFI to function as a single, integrated operation, coordinated from his office down. He wanted AAOs, like Berman, Kari and Toskey, to have a their own stake in the OFI enterprise. He offered Ulrich a major post in the OFI - chief of pipeline safety - but DOT would not be convinced. Rhett, by provisions of the reorganization plan, had won the department's authority, but, as DO saw it, he would not win its blessing without independent review and counsel, through Ulrich and the Alaska Pipeline Project office.

As a result of this organization self-segregation, Ulrich considered himself "a little bit on the outside" of the OFI decision-making process

as well as its formal organization. /93 "Our [DOT] advice has been sought in a number of areas a number of times," Ulrich explained, "but we aren't involved as much as I'd like in the [normal information and decisional] chain." Ulrich attributes this neglect less to Rhett, whom he felt had been personally attentive, than to the pressures of timely decision-making and the preferences of some senior staffers who wished to avoid the complications of constant DOT "consultation" and coordination. Both Rhett and Ulrich described the OFI-DOT association scheme during Phase I as satisfactory, although Ulrich was less sure of its utility for Alaskan construction.

A fourth operational characteristic of the OFI organization was its great reliance on service and consultant contracts. Contracting helped offset the difficulties Rhett was encountering in staff recruitment and, at least in principle, enabled him to purchase only the expertise he required, when he required, at the level he required and only while required. It had a great appeal from a management efficiency perspective - a viewpoint Rhett weighed heavily.

OFI, in the next four years, would secure major contracts in four general areas: administrative support, technical assistance, automated data processing and rate base audit. The first, and perhaps both the simplist and the largest, was for administrative support, secured from the U.S. General Services Administration (GSA). GSA, paid with interagency transfer funds, administered OFI payroll and accounting systems. The arrangement spared Rhett from expanding his own administrative machine and assured him, generally, that capable services would be rendered. Of course, most administrative functions, such as personnel, MIS, budget and contract management, were attended in-house.

Unified Industries, Inc. (UII), an engineering consultancy based in northern Virginia, was granted the ANGTS Phase I technical assistance contract in March 1980 under the Section 8(a) program of the Small Business Administration, which promotes minority firms. /94 In effect, UII would become OFI's main technical consultant on project issues, as general as design review and as specific as frost heave methodology. Its initial contract, worth $2 million for 1980, was initially awarded by DOT and later assumed by OFI. Since UII was a rather new corporate creature, some OFI personnel, realizing the contract's central role to the agency's success, questioned the efficacy of the minority set-aside route for securing such essential services. Some believed that OFI should have used UII only briefly, as it solicited the services of a larger, more established contractor, such as Williams Brothers, TAPS consultant to the Alyeska group.

The UII choice, however, was not without virtue. First, Section 8(a) enabled the procurement of technical assistance immediately, free from the delay and complication of the standard federal contracting process. Therefore, DOT (and later OFI) could hire UII on the spot, given the SBA guidelines, and perhaps ensure uninterrupted oversight at

the project's outset. Second, UII, despite its official inexperience and "minority business" status, was not a novice outfit. It subcontracted System Development Corporation, a consulting giant which had a large piece of the TAPS action. UII could mine SDC for those employes qualified to ensure pipeline integrity, safety, cost control and environmental protection.

UII, which opened its main support office in Irvine in May 1980, would provide technical support to OFI on a variety of engineering and environmental issues, most associated with Alaska Leg design review. Initally, most of its efforts were dedicated to design review of East and West Leg segments, a study of the TAPs proximity question and, after July 1980, a review of NWA's certification filing for the Alaska Leg. /95 As the NWA formal design began to emerge, in 1981, UII focused most of its energies on this segment.

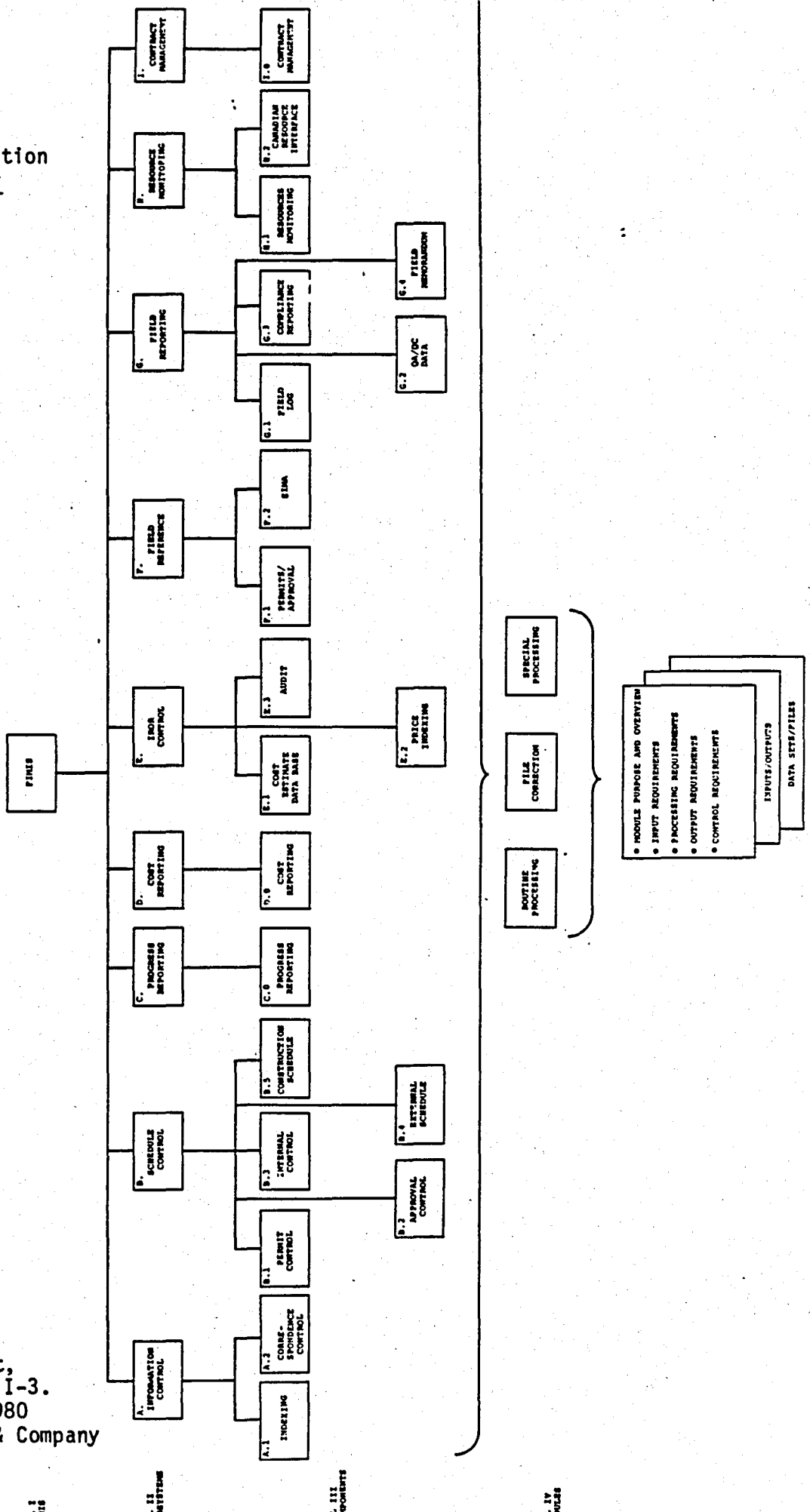
Many of Alyeska's problems with TAPS could be traced to its inability to monitor, on paper, its project progress in the field. /96 Its central managers had little reliable, integrated data on TAPS during construction to promote adequate monitoring. Cook and Greenstreet, students of the oil pipeline effort, understood the advantages of a comprehensive management information system. With top management's blessing, Lackey and Figel began a rather elaborate effort to design and develop OFI's FIMIS, a state-of-the-art management information system. Its development and partial implementation would involve three additional contract.

Touche Ross, a prominent Washington-based management consultancy, was engaged by OFI under "sole source" criteria (which maintained it had unique and essential qualification) to design the FIMIS. Sole source justification arose from the fact that Touche Ross had been a management consultant to ICC and then FERC during TAPS. The firm established a five-task FIMIS development process, of which it would attend the first three tasks. By December 1979, it produced the Task 1 Report, a "Summary of [OFI] Management Processes and Information Requirements", based upon preliminary sponsor designs, TAPS experience and preliminary governmental judgment. /97 It served as the basis of the Task 2 Report, a "Conceptual Design of the Federal Inspector Management Information System (FIMIS)." /98 The Task 1 Report had identified five major functional responsibilities for OFI:

- Reviews and approvals
- Cost control and monitoring
- Compliance monitoring and enforcement
- Project monitoring and coordination
- Internal management /99

Touche Ross, in its Task 2 Report, proposed nine information subsystems (See FIGURE 3-4) to attend these requirements:

FIGURE 3-4: FIMIS Documentation Hierarchy



Source: Task 3 Report, Volume 1, p. I-3. August 31, 1980 Touche Ross & Company

1 A comprehensive Information Control subsystem "to provide a centralized means of controlling all forms of ANGTS project data," subject to indexing, storage and instant retrieval.
2 A Schedule Control subsystem to assure that the sponsors, OFI and other parties accomplish their required activities on time.
3 A Progress Reporting subsystem "to record the status of construction at a detailed level and to identify potential variances from the construction schedule and cost budget."
4 A Cost Reporting subsystem to monitor ongoing project cost performance and to help identify trents in overall project costs.
5 An IROR Control subsystem to support the OFI in meeting its responsibilities for implementing the IROR mechanism. More specifically, this subsystem would automate the IROR process and compensate for sponsor revisions.
6 A Field Reference subsystem to provide OFI field staff with a listing of selected monitoring requirements (environmental constraints, approved engineering designs and permit conditions) by pipeline location for on-site review.
7 A Compliance Reporting subsystem to summarize, analyze and report on field compliance monitoring activities.
8 A Resource Monitoring subsystem to control and coordinate key project resources (materials, labor, equipment) and activities (contracts, consultants and EEO/MBE initiatives). This subsystem, along with the Contract Management subsystem which follows, were envisioned as manual rather than automated systems.
9 A Contract Management subsystem to provide goods and services for OFI, monitor and review contractor activities and ensure all procurement actitivies are in compliance with the U.S.-Canadian Agreement and federal procurement regulations. /100

Each subsystem, in turn, was composed of components, which represented discrete organizational tasks, such as permit control (under Schedule Control) or price indexing (under IROR Control), and utilized a single master data file. Touche Ross contractors, after interviewing project principals, studying the TAPS record and bringing the latest MIS techniques to bear, "systematized" these components and integrated them into a comprehensive FIMIS system.

There was, however, one rather serious problem. OFI was still in the process of establishing its organization and delineating major staff responsibilities. It was rather difficult for the Touche Ross analysts to incorporate offices yet unenvisioned or to "systematize" functions still quite uncertain. As a result, the firm was compelled to develop the FIMIS on organization and task assumptions which did not alway prove valid. /101 As the OFI filled out organizationally and its mission was more completely defined, there was some criticism that the FIMIS, after an investment in excess of $200,000, was too far abstracted from the final OFI reality to be of real practical value. Consequently, the FIMIS, perhaps OFI's boldest administrative initiative, became one of its biggest disappointments.

Nevertheless, in June 1980, Touche Ross presented OFI with a FIMIS draft Request for Proposal (RFP), a document from which OFI could eventually solicit bid proposals for its primary FIMIS support contract. /102 (Tasks 4 and 5 on FIGURE 3-4.) This contract would acquire automated data processing support for the FIMIS, particularly its seven automated subsystems. About two months later, the Task 3 Report, "Requirements for the Federal Inspector Management Information System," provided detailed specifications of inputs, processes and outputs for the FIMIS subsystems and their components. /103 It was delivered to Rhett on August 31, 1980, thus completing Touche Ross's contract responsibilities.

OFI, during the FIMIS identification and design process, had hired Planning Systems International, Boston, also under SBA's Section 8(a) program, to attend its data processing requirements until a RFP for FIMIS support could be devised. PSI, under the guidance of Lackey and Figel, automated a FIMIS prototype system composed of three subsystems: information control, property management and environmental reference. /104 It became known as the Interim Management Information System, or IMIS. Figel, with some PSI support, also maintained a project cost of service computer model, which calculated, under various programmed assumptions, the likely cost of Alaskan gas to American consumers. /105

On December 11, 1981, OFI awarded a contract for the design, implementatin and operation of the FIMIS to the System Development Corporation (SDC), a subsidiary of the Burroughs Corporation based in Santa Monica, California. SDC, like Touche Ross, had been involved in the TAPS project. /106 The first phase of the contract involved $3.1 million over 18 months, with an optional six and a half year extension, worth as much as an additional $9.25 million. SDC shifted the IMIS subsystems from a minicomputer configuration to a remote IBM main frame computer (although two of the three subsystems would eventually be shifted back) and developed several new administrative programs. SDC was also asked to reassess OFI's ANGTS responsibilities and associated ADP requirements and to revise the FIMIS plan, composed by Touche Ross. A variety of marginal revisions were made before April 30, 1982, when the sponsors announced a one-year project slip to 1989 and scaled down activities considerably. The FIMIS renovation was abandoned shortly thereafter. OFI's MIS program for Phase II is much more modest than the original FIMIS plan. For the second phase, OFI has decided to rely more on sponsor system reporting for project monitoring, contract for major ADP support services and internally maintain only a few simple automated administrative programs, probably on microprocessors.

OFI's fourth major contract type, that involving rate base audit, was awarded to Main, Hurdman and Cranstoun (know as Main Hurdman), a prominent accounting firm based in New York City. /107 On July 6, 1981, Main Hurdman was awarded a $1.2 million competitive action contract to review NWA's management control systems and perform quarterly rate base audits of expenditures made by the three sponsor groups from early 1981 through September 1983. The contract had been initiated by an April 15

request-for-proposal (RFP), developed by Berman and Vance. Berman would provide supervision.

One final contractual arrangement, associated with technical oversight, requires mention. NWA, on the Alaska Leg, was faced with a variety critical Arctic engineering issues, most importantly mitigating frost heave effects on pipeline integrity and reducing project damage to the Alaskan permafrost. OFI, responsible for design review, needed assistance beyond UII's expertise to ensure that NWA's responses to these challenges were sufficient. In autumn 1979, the OFI asked the U.S. Army Corps of Engineers to organize a committee of Arctic engineering experts, from federal agencies, major universities and private industry, to advise it on permafrost, frost heave and other similar problems. On December 11, 1979, the Cold Regions Engineering Technical Committee (CRETC) was constituted and convened in Washington, D.C. /108

The CRETC, in its assessment of NWA plans, often suggested alternative test procedures, based upon its members' collective expertise. In effect, it served initially as a prospective advisory board to both the OFI and NWA. (NWA would establish its own CRETC-type council in summer 1980.) /109 Also, CRETC created a buffer step between sponsor planning and formal OFI review. In this respect, it "provided a moderating influence on the many demands that have been placed on the sponsor" by various interested groups, one OFI report acknowledged, "and has helped to steer the program toward reasonable and pragmatic field and laboratory test installations, useful theoretical analysis and sound criteria for judging the results." /110

As these processes - staffing and organizing the agency, establishing AAO relations, reconciling internal tensions over the agency's mission and awarding major support contracts - occurred, an OFI "organizational character" began to emerge. Not surprisingly, Rhett appears as its primary source, by his promotion of balanced evaluation (discussed earlier), his preference for administrative restraint and his admiration for neutral competence.

Service in the Corps and the EPA enabled Rhett to refine his sense of balanced evaluation. He recognized that government could and, on occasion, did impose uneven and unwarranted demands upon private enterprise, demands which did not always promote the public good. Furthermore, he understood that OFI's responsibilities were two-fold. OFI, clearly, was to improve the quality of federal oversight of the ANGTS over its earlier TAPS effort, in terms of ensuring regulatory compliance with federal law. But, additionally, OFI was directed to expedite any governmental reviews and, in effect, facilitate sponsor activity. The Congress had already declared that ANGTS was in the public interest, as configured by the President's Decision. Therefore, the OFI would, by this reasoning, generally serve the public interest as it served the ANGTS sponsor interest. Rhett would not apply this as his general judgmental premise, but it was a consideration in his decisions. He

was determined that OFI, in its determinations, weigh safety, environmental and other regulatory concerns against project delays, which would likely increase costs. Rhett made this clear to sponsor officials. He would always be willing to listen to their side of an issue.

Rhett, with regard to ANGTS, preferred administrative restraint. The OFI, he would regularly remind his subordinates, was not a project sponsor. The federal government's job was to monitor ANGTS, in accordance with federal law, not to design or build it. ANGTS was, after all, a private construction project. The Federal Inspector, despite his considerable authority, could not, should not and, as far as Rhett was concerned, would not try to dictate sponsor judgments or decisions. He encouraged and occasionally required prospective government review and counsel, in a attempt to avoid future misunderstandings, and this approach was often welcomed by the sponsors, who hoped to avoid the same costly snafus. All in all, Rhett believed that the sponsors were free to determine their project course as they wished, as long as they complied with applicable law. Rhett's inclination for administrative restraint, it should be noted, was not always shared by his senior managers or contractors, some of whom had considerable expertise in project management and felt that OFI should be more directive in its relations with the sponsors.

Rhett, a career Army officer, prized the neutral competence - professionalism - associated with military service and encouraged its application in the OFI. This did not merely imply "going by the book" in agency decision-making, for the OFI mission often precluded rigid, conventional enforcement. Instead, this "neutral competence" implied advanced formal training and substantive expertise, meaningful experience, application of acceptable principles, high professional conduct - ingredients which enabled good judgment and sensitive administration on the part of his personnel. Rhett was very attentive to priority tasks regardless of his own predilections. He expected the same attitude on behalf of staff. And he did not easily suffer sloppy or inexpert work, which explained in part his penchant for dipping deep into the organization to troubleshoot problems - as minor as office space allocation - whenever he felt they were not being properly attended. Finally, Rhett was willing to delegate authority to subordinates who had won his confidence by virtue of their competence and loyalty. However, he reserved the final judgment on any issue and he would hold responsible those to whom he had granted authority.

Another aspect of this neutral competence was political party nonalignment. Rhett, both by personal preference and political necessity, maintained a low profile and a rather neutral party posture for himself and his agency. A Carter appointee, he had retained his post after Ronald Reagan's election due to his minimization of party ideology, his reputation as a thoughtful, impartial administrator, the new administration's preoccupation with other issues and, perhaps most importantly, his support on the Hill, particulary from Senators Jackson and Stevens.

Furthermore, Rhett's administrative approach - defined in large part by balanced evaluation, administrative restraint and neutral competence - was not at all inconsistent with the views of the Reagan entourage. The Federal Inspector impressed as a "good soldier" - informed, capable, responsive - and appeared generally sympathetic to the new administration's views on the conduct of federal regulatory affairs.

This OFI "organizational character," discussed above, produced a particular oversight orientation, one which might be more appropriately regarded as secondary rather than primary. Rhett, given his predilections for administrative restraint, preferred that oversight on the Lower Leg prebuild, a rather conventional venture, be modelled after a quality control/quality assurance (QA/QC) system rather than a comprehensive surveillance program. For design review, this implied that OFI staff would screen plans for simple acceptability and legal compliance, rather than holding out for an "optimal" alternative, known or unknown. In terms of field construction, OFI would concentrate on monitoring sponsor systems - consolidated, familiar, accessible - rather than the construction work itself. Prospective OFI review and approval of sponsor plans and programs, emphasized by Rhett, helped ensure that sponsor systems would be reliable and responsive to any necessary correctives. By this approach, the government could satisfy its oversight mission at a much reduced effort and, consequently, lower cost.

To this end, Rhett advocated lean overhead and staffing. His native reluctance to staff up was compounded by the 1981 Reagan hiring freeze, which conspired to hold initial OFI staff levels below projections. Rhett's preference for minimal staffing did not always please his senior managers, but he prevailed. The Federal Inspector was very reluctant to build a large OFI bureaucracy without a Phase II mission to engage it. As a public manager, Rhett nurtured and prized his reputation as a spendthrift, a reputation which lent an unusual credibility and legitimacy to his annual budget requests. Nearly every year as Federal Inspector, he would return a percentage of OFI's approved, but unused, appropriations to the U.S. Treasury midway through the fiscal year.

OFI's administrative functions, despite Rhett's lean staff philosophy and the freeze, did beef up through the middle months of 1981. The Personnel Office, for instance, expanded to a six and MIS, in late 1981, grew to three OFI professionals, a secretary and a contract staff of about a dozen people. The program offices, particularly Engineering Review and Environmental Review, also expanded steadily at their Irvine headquarters office. The East and West Leg field offices, operated along the lines of a QA/QC system, remained rather small. Dennis Schroeder, OFI's Omaha Field Office director, had been unofficially selected by Rhett for his job in February 1980, but was not hired to organize Omaha operations until late August - several months after FERC had issued Northern Border the East Leg certificate and only a few months before a construction start was scheduled. Leo Bellarts, OFI's San Francisco

Field Office director, was actually hired after final West Leg certification and his three-man staff organized only a couple months before PGT construction began.

Regulatory Approvals

Regulatory approvals preoccupied ANGTS agencies, particularly the FERC and DOI, during 1980 and 1981. (See Chronology in FIGURE 3-5.) DOI was responsible for assuring that project construction and operation on federal lands would not damage ecological or environmental systems. Assurance is achieved prospectively through the issuance of a right-of-way grant, conditioned by stipulations regulating sponsor behavior. FERC was responsible for auditing and evaluating project costs as to avoid overruns and inefficiencies that might, through rate base inclusion, be passed on to natural gas consumers. Its preliminary grant is a certificate of public convenience and necessity, which acknowledges public benefit from project construction and outlines rules which govern project planning, construction and operation. The Interior mission is framed to guard the general "public interest" while FERC's responsibility is primarily focused to protect the natural gas consumer.

A right-of-way grant is "an authorization to use a specific piece of public land for uses such as roads, pipelines, transmission lines, and communication sites. The grant authorizes rights and privileges for a specific use of the land for a specified period of time." /111 It is required to protect land resources, as noted above, but also to coordinate all activity over public land, to promote rights-of-way sharing, to facilitate energy development and to protect the holder's investment in his improvements on the right-of-way.

The standard right-of-way application and grant process may be illustrated in six steps. /112 First, an applicant seeking right-of-way across federal land arranges a preapplication meeting with the area manager of the Bureau of Land Management (BLM) state or regional office which has jurisdiction. Second, the applicant and a BLM representative, after reaching an understanding of one another's needs, complete the application together. Third, maps and various fees, including a non-returnable payment to reimburse the government for monitoring costs and an annual rental fee, are enclosed and the application is submitted to Interior for consideration.

Fourth, BLM reviews the application for acceptability, including the probable impact the activity will have on the area's social, economic and physical environments. In large projects, an environmental impact statement will be conducted by BLM, at the applicant's expense, to help in determination. The application may be rejected for a variety of reasons, usually in the likelihood of serious environmental harm. Other grounds for denial include a proposed usage inconsistent with public land management practices or laws, unqualified applicants, technical or financial inability to see the project through or the availability of

FIGURE 3-5: Chronology of Major ANGTS Events, 3

1979 - 1984

June 8, 1979:	John T. Rhett, Jr., is nominated as Federal Inspector.
June 11, 1979:	President Carter signs Reorganization Plan No. 1 of 1979, which stipulates the duties of the Federal Inspector.
June 13, 1979:	Department of the Interior conditionally authorizes the Right-of-Way grant for construction across federal land in Alaska.
June 21, 1979:	President Carter signs Executive Order 12142, which implements the Federal Inspector's Executive Policy Board (EPB).
July 1, 1979:	The Office of the Federal Inspector (OFI) officially comes into being.
July 13, 1979:	Rhett is sworn in as Federal Inspector.
August 6, 1979:	FERC approves a 48-inch pipeline size and 1260-psig pipe pressure for the Alaska Leg.
September 6, 1979:	FERC issues its final ANGTS IROR and tariff order.
October 15, 1979:	The Subcommittee on Oversight and Investigations of the House Interior and Insular Affairs Committee hears testimony on ANGTS financing and OFI implementation.
November 1979:	Northern Border files its Certification Cost and Schedule Estimate (CCSE) with the FERC for the East Leg Prebuild.
January 11, 1980:	FERC issues an order granting final certificates of public convenience and necessity authorizing the construction and operation of the West Leg Prebuild.
March 10, 1980:	OFI signs major technical support contract with Unified Industries, Inc. (UII) for engineering and environmental assistance in ANGTS oversight.
March 12, 1980:	Interior issues Right-of-Way grant to Pacific Gas Transmission (PGT) for the West Leg Prebuild.
April 28, 1980:	FERC issues an order granting final certificates of public convenience and necessity for the prebuild portion of the East Leg (Northern Border), at a 811-mile length and cost of $1.2 billion.

June 10, 1980: U.S. and Canada formally agree on ANGST procurement procedures.

June 13, 1980: FERC issues a supplemental order authorizing construction of a prebuild section to deliver Alberta natural gas to southern California.

July 1, 1980: Northwest Alaskan (NWA) files eight-volume application for final certification of the Alaska Leg with the FERC and applies to Interior for Right-of-Way grant.

Congress unanimously passes concurrent resolution indicating continued support for ANGTS.

July 17, 1980: President Carter, in a letter to Canadian Prime Minister Trudeau, assures the Government of Canada of American resolve to complete construction of the ANGTS.

Canadian government approves construction of ANGST Phase I.

September 12, 1980: Public Service Commission of North Dakota denies East Leg sponsors a permit to cross the state within the corridor previously approved by the Decision.

December 1, 1980: Interior issues Right-of-Way grant to NWA for Alaska Leg.

December 8, 1980: OFI issues Notice to Proceed to PGT for West Leg Prebuild construction. Construction begins.

March 11, 1981: Interior issues Right-of-Way grant to Northern Border for East Leg Prebuild, pending resolution of North Dakota litigation.

April 2, 1981: U.S. District Court for North Dakota grants motion for summary judgment in favor of the OFI and the FERC, thereby allowing work to proceed on the East Leg segment after a nearly seven-month delay.

April 18, 1981: OFI issues Notice to Proceed to Northern Border for East Leg Prebuild construction. Construction begins in early May.

June 17, 1981: ANGTS sponsors announce one-year slip in project, from target completion date of winter 1985-86 to winter 1986-87.

McMillian, NWA chairman, requests ANGTA waivers from President Ronald Reagan.

October 1, 1981: West Leg Prebuild construction complete, on schedule and, at $165 million, under budget. First Alberta gas enters West Leg Prebuild for shipment to California.

October 15, 1981: President Reagan recommends ANGTA waiver proposal to the U.S. Congress.

Late October 1981: The Subcommittee on Fossil and Synthetic Fuels of the House Energy and Commerce Committee hears testimony on the ANGTA waiver proposals.

December 10, 1981: Congress, after considerable debate, approves Reagan's ANGTA waiver proposal.

December 15, 1981: President Reagan signs ANGTA waiver proposal into law.

April 30, 1982: ANGTS sponsors announce a second project slip from target completion date of winter 1986-87 to winter 1989-90, based upon obtaining financing in mid-1984. Over next year, sponsor and government organizations reduce personnel.

September 1, 1982: East Leg Prebuild construction nearly complete, with exception of some final restoration work, on schedule and, at $1.13 billion, under budget. First Alberta gas enters East Leg Prebuild for shipment to U.S. Midwest.

January 1983: A blue-ribbon Alaskan energy advisory commission recommends the construction of an alternative $26.6 billion pipeline, the Trans-Alaskan Gas System (TAGS), to parallel TAPS.

May 9, 1983: Foothills, the Canadian sponsor consortium, finishes the construction of its prebuild sections. ANGTS Phase I is officially complete.

September 1983: TAGS proponents incorporate as Yukon-Pacific Corporation (YPC) to promote their project.

September 20, 1983: Williams Companies acquires the Northwest Energy Company, the NWA parent company previously chaired by McMillian. New NWA chief executive, Vernon T. Jones, informs OFI that the Williams Companies will continue to actively support ANGTS and provide leadership for the project.

November 16, 1983: The Subcommittee on Energy Regulation of the Senate Energy and Natural Resources Committee hears testimony on the competing ANGTS and TAGS projects.

Source: OFI "Chronology of Major Events" and Quarterly Reports.

other, more suitable alternatives. Fifth, BLM officials generally condition a right-of-way grant with stipulations, which assign limitations and prohibitions to the grant. The applicant must comply with these stipulations if he wishes to continue his use of the land. Finally, the grant, with attached stipulations, is issued to the applicant. Activity on public lands may not begin, however, until a "notice to proceed" or similar authorization is given. This assures the preliminary stipulations are satisfied before work may progress. The process rarely moves beyond the preapplication stage if the government is not willing to issue a grant for the requested purpose.

The standard BLM right-of-way grant process, however, did not operate for the ANGTS, as the previous chapters have demonstrated. /113 Arctic Gas, the first major ANGTS promoter, filed for its right-of-way grant on March 21, 1974 - nearly six and a half years before an Alaskan grant would eventually be issued to NWA by DOI. In response to the Arctic Gas application and one which followed from El Paso, DOI compiled a massive environmental impact statement, issued as seven volumes in March 1976. Judge Nahum Litt was appointed by the Federal Power Commission, which had controlling regulatory interest in the matter, to hold hearings on the competing proposals. The EIS and the Litt hearings, in large part, encouraged a third application, that from Alcan, led in Canada by Blair and in the United States by McMillian.

The Alaska Natural Gas Transportation Act (ANGTA), passed by Congress on October 22, 1976, suspended the right-of-way grant process until after a sponsor was chosen. Grant, usually determined by DOI and FPC (later the FERC), was now contingent on political selection of the "superior" plan and route by the President. President Carter, in his Decision on September 22, 1977, selected the Alcan plan, sponsored in Alaska by McMillian's NWA, the Northwest Alaskan Pipeline Company.

With the applicant, NWA, and the route, Alaska Highway corridor, identified, the grant process began again at step one. NWA, in its construction plans and designs, still had to satisfy a list of stipulations, specified in the Decision and elsewhere, governing the ANGTS right-of-way grant. In late 1977 and throughout 1978, the original Executive Policy Board (EPB), composed of Goldman, Martin, Fearnsides and other officials who governed federal ANGTS policy, decided to compose a "generic" list of grant stipulations. This list would not be restricted to a single ANGTS leg, or even all three project legs, but would provide a general model for any major pipeline grant in the future. It was an extremely ambitious venture, precisely the kind of dramatic stroke the EPB members wanted to be associated with. The model stipulations would be developed primarily from the TAPS right-of-way specifications and with the counsel of a right-of-way task group led by DOI.

The EPB's list of generic stipulations, however, was never completed. Several problems arose at the outset and continued to dog the initiative's progress. First, and perhaps most fundamental, standard

and Arctic pipelining were simply too different in terms of engineering and environmental protection to be governed by the same rules. Usual procedures for construction and operation in moderate climes were insufficient for Arctic building. Second, and related to this first point, it was unfair that conventional pipeliners in the lower 48 states should be governed by the stringent specifications required for Arctic pipeline construction. This had been a principal complaint of Northern Border and PGT at the Runnels' hearings. /114 An Iowa or Idaho river crossing, they argued, simply did not demand the level of precaution required on the Brooks Range and, furthermore, DOI, in the East Leg and West Leg right-of-way grants, was wrong to demand it. Sponsors believed that in addition to suffering excessive regulation, but would have to pay for their own additional misery, given the reimbursement clause for government monitoring expenses.

All in all, the generic stipulations imperative complicated and delayed project approvals instead of simplifying and expediting them, as the Federal Inspector concept had intended. By summer 1978, the idea was slowly being abandoned. Leadership on the West Leg grant, once with the BLM right-of-way task force in Washington, shifted west to BLM's Sacramento office, where stipulation activity was more narrowly focused and federal field agents were more familiar with and more sympathetic to PGT's concerns. Nevertheless, many of the "generic" provisions still found their way into the ANGTS right-of-way grants, enlarging the East and West Leg documents and further extending the grant process.

All three grants, of course, were eventually issued. The West Leg grant was first, issued to PGT on March 12, 1980. /115 The grant itself was about a half-dozen pages long and its governing stipulations filled an additional 20 pages. Since the West Leg prebuild, for which the grant was designed, involved standard pipeline construction over only two miles of public land, charges of "excessive regulation" on this particular segment may not have been entirely groundless. In any event, OFI's notice to proceed was issued December 8, 1980, and West Leg construction began the very same day. The East Leg grant, temporarily stalled by litigation in North Dakota, was finally issued in March 11, 1981. /116 An OFI notice to proceed was issued to Northern Border on April 18, 1981 - about five weeks after the grant. Construction began in early May. The Alaska grant, somewhat more detailed and complex than its two lower 48 counterparts, was signed by Interior Secretary Cecil D. Andrus on December 1, 1980. /117 It involved 430 miles of federal land.

The FERC regulatory process was somewhat more complicated. The initial FERC authorization, noted earlier, is the certificate of public convenience and necessity. In the transmission pipeline context, the certificate is a federal license granted to a company which, in return for the operation of its facility in the "public interest," is guaranteed the recovery of its operating costs and a return on capital. /118 In the ANGTS context and in accord with the Decision, the company must also follow certain construction and operation stipulations. A "certifi-

cated" facility, granted its federal license, enjoys certain privileges, such as eminent domain and legal assistance from FERC when local and state courts challenge its activities. As Cornell Professor Jerome Hass has written:

> A pipeline must, of course, demonstrate that such a certificate lives up to its title. Generally, this means it must demonstrate such things as a need for the facility (a gas supply at one end and a market at the other end), economic and financial viability, adequate planning, and construction and operating capability. /119

These aspects are addressed in the certificate application. /120 Arctic Gas filed its application for certificate with the FPC (FERC) on March 21, 1974, the same day its right-of-way application was delivered to DOI. El Paso's application was filed later that autumn, on September 24, 1974, and the Litt hearings were ordered by the FPC to assess the two competing plans. On July 9, 1976, in the midst of the hearings, Alcan filed its application with the FPC (reorganized as the FERC in autumn 1977). It would be revised on March 8, 1977, to account for 48-inch diameter pipe and routing changes. The FPC's slow review process for certification, coupled with Interior's cumbersome grant review activities, encouraged ANGTA passage and the President's Decision.

On January 6, 1979, about 18 months after the President's selection of the Alaska Highway plan, the Northern Border (East Leg) group filed for FERC approval to ship Albertan natural gas through ANGTS Phase I facilities immediately upon their construction. /121 The following year, FERC issued final certificates for both the West Leg (January 11, 1980) and Northern Border (April 28, 1980). The Alaska Leg application, modified in March 1977, was rendered conditional acceptance about nine months later, to enable serious pipeline planning and design. On July 1, 1980, NWA filed a revised eight-volume application for final certification of the Alaska Leg, which included dramatically higher costs. Final FERC certification, of course, is still pending; it cannot be issued until NWA has secured a satisfactory financing plan.

The FERC, in addition to the certificate, had other ANGTS-related regulatory matters to attend. First among these was the incentive rate of return (IROR) mechanism, described at some length in Chapter Two. The IROR, as noted earlier, "was designed as a means to offer the ANGTS project sponsors a positive reward for superior cost and schedule control," Berman writes. /122 Generally, "if actual construction costs are less than (greater than) projected capital costs the sponsors earn a higher (lower) rate of return on equity."

FERC proposed its IROR structure, as required by the President's Decision, on May 8, 1978. It entertained comments on the design for several months, and a preliminary IROR mechanism was defined on December 1, 1978. The mechanism was refined and its numerical values were designated by Order 31, issued on June 8, 1979, after a second commenting

period. On September 6, 1979, the FERC decreed that Order 31, when supplemented with marginal changes from new Order 31-B, was the final, unappealable ANGTS IROR and tariff determination, applicable to the East and Alaskan Legs. /123

The IROR was related to two other prominent and interrelated FERC functions: Certification Cost and Schedule Estimate (CCSE) review and cost-of-service tariff formulation. The CCSE, also discussed in Chapter Two, was a lynchpin of the IROR formulation; it was the standard by which actual construction cost performance would be judged. The CCSE, essentially, was the best estimate of project capital costs, exclusive of financing and other costs. It was formulated by the sponsors, then submitted to the FERC, resonsible for assuring the validity of the estimate, before final certification. Since the West Leg was not subject to IROR, its certification did not require a CCSE. On April 28, 1980, FERC certificated Northern Border's prebuild sections at a $1.237 billion cost. /124 The Alaska Leg, after preliminary certification in 1977, entered a CCSE of $7.9 billion with its final application on July 1, 1980. This estimate was later raised to $8.5 billion. FERC, in an order on September 21, 1982, would approve only $6.9 billion of this amount, although NWA could continue its appeals for additional cost inclusion. /125

Usually, transmission pipelines charge fixed-rate tariffs (transportation charges) which include all operating costs and a negotiated rate of return on the operating firm's capital cost investment. If the firm requires an increase in rates, it must process a formal appeal with the FERC. With the ANGTS, a different tariff, a cost of service tariff, was specified for the Alaska Leg and Northern Border sections. As Professor Hass has observed, "the cost of service tariff, automatically on a monthly basis, adjusts to all changes in costs." /126 The pipeline sponsors (NWA on the Alaska Leg, for instance) would be permitted to include any new legitimate costs to the tariff without the standard FERC appeal.

The ANGTS cost of service tariff is composed of five elements:

- Standard operations and maintenance charges.
- Property taxes.
- Depreciation, which represents a return on the initial capital investment, including AFUDC, based upon straight-line cost projection over the life of the project.
- Return on invested capital or rate base, which is the weighted average of the interest on debt and the allowed return on equity, as determined by the IROR.
- Federal and state income taxes on equity. /127

When each ANGTS section is added together with others in a delivery system, and the cost of gas to fuel the pipeline compressors is included, the total system revenue requirement is identified. This total

is then divided by the anticipated throughput (gas flow) to produce the estimated nominal dollar transport charge per million British thermal unit (MMBtu). FERC, given assumptions on capital costs, interest rates, inflation and demand projections, developed a model to compute cost of service. It was developed and operated primarily by Figel, first at the FERC and later at OFI. /128 In this manner, FERC was able to perform sensitivity analyses on various tariff scenarios and provide, for themselves and other project principals, a general idea of prospective tariff rates. Alaskan gas, according to the cost of service model and the best available information in 1981, was estimated at a average of $4.37 to $4.47/MMBtu in 1980 dollars. Subsequent estimates would find this value to be somewhat low.

A fourth major FERC responsibility, also discussed in its Canadian context in the Second Chapter, dealt with system efficiency: the approval of pipeline size and pressure. On November 29, 1978, Foothills announced the award of a contract for 1.5 million tons of 56-inch low pressure steel line pipe to a pair of Canadian steel producers. The award was made despite U.S. protests over pipe specifications and Canada's implementation of unilateral procurement procedures in apparent disregard for the Agreement on Principles. FERC, on August 6, 1979, issued an "Order Approving Alaska Segment Design Specifications and Intital System Capacity." /129 This determination approved a high-pressure Alaskan Leg pipeline, with a 48-inch diameter and a maximum allowable pressure of 1,260 pounds per square inch (psi).

The order was appealed by the State of Alaska, following denial of a rehearing by FERC. /130 The State argued that by determining line pressure in isolation from related issues such as carbon dioxide content and conditioning plant design, FERC had denied due process by rendering subsequent hearings incidental. The Court found the commission's hearing denial as a "routine step," clearly within its authority and entirely proper under the expedited procedures of the ANGTA. Later, on January 31, 1980, the FERC upgraded the diameter for West Leg prebuild (Phase I) transmission pipe from 36 inches to 42 inches. /131

FERC, in a fifth appointed duty, had to identify responsibility for the North Slope gas conditioning plant, required to treat gas before transmission south. Professor Hass explains the conditioning process:

> When gas and oil are taken from the top of a[n associated] well, they flow into a separator; the gas then flows into a dehydrator, where water is taken out prior to it being transported even locally across the field to be reinjected or further processed for sale. The gas must be further conditioned prior to transportation by pipeline, to remove impurities which could deteriorate the pipeline system through time and to reduce the carbon dioxide content of the gas in order to improve the economic efficiency of the system [avoid shipping useless carbon dioxide 4,800 miles]. It must also be processed to remove the gas liquids which could precipitate out and clog the system. /132

The conditioning plant was to be prefabricated in modular form in the lower-48 states and then transported in parts to Prudhoe Bay's Point Barrow by barge during the summer. The plant, including AFUDC, was estimated to cost $4 billion to $5 billion upon completion, scheduled for early 1986.

The Prudhoe Bay producers - Exxon, ARCO and Sohio - insisted from the start that the conditioning plant was a component of the transmission system, hoping to shift its financing burden on the sponsors (NWA) and the conditioning costs to the consumers as a supplement to the wellhead price. This was, however, contrary to standard practice. The FERC had traditionally viewed conditioning facilities as a function of production, hence a component of the wellhead price, not a supplement to it, and its subsequent actions reinforced this view.

On August 1, 1979, the FERC issued an EIS which found Prudhoe Bay an environmentally acceptable site for the gas condition plant - a contention producers had opposed to encourage plant construction physically and conceptually away from the wellhead. On August 24, 23 days later, the agency ruled that pursuant to Section 110 of the new Natural Gas Policy Act, the gas conditioning plant was the financial responsibility of the North Slope producers. /133 The FERC ruling implied that the producers or the State of Alaska, not the ANGTS sponsors, would have to finance, build and operate the plant. On October 31, however, the FERC agreed to postpone final decision on the production-related conditioning costs, at the request of the Secretary of Energy. /134

Canadian Relations

Between January 1980 and October 1981, there was as much ANGTS activity north of the border, in Canada, as could be found in the United States. After all, Foothills Pipe Lines, the Canadian ANGTS partner formed by Blair's AGTL and Westcoast Transmission, was responsible for 2,041 miles of ANGTS pipeline, more than two-fifths of the project's length. Progress was encouraged by several events. First, on February 28, 1979, the Canadian NEB, in a new demand/supply report on natural gas, announced a surplus of Albertan gas available for export. /135 The NEB not only endorsed steady, sustained gas export to the United States, but recommended its transmission through the planned ANGTS Phase I delivery system to American western and midwest markets. On December 6, 1979, the NEB transformed its report intentions into substantive policy. /136 It approved supplemental 3.75 Tcf grant of Canadian gas exports to the United States, with 1.8 Tcf to be brokered by Pan-Alberta Gas Ltd., an AGTL affiliate, and transported through the ANGTS prebuild. The NEB report and export grant represented Canadian determination, after a frustrating series of fits and starts described in earlier chapters, to remain a long-term U.S. supplier.

Second, as noted earlier, Prime Minister Trudeau received two key project assurances from President Carter on March 5, 1979. The first

indicated U.S. resolve to complete the entire project and the other confirmed American interest in "swapping" Canadian gas through the ANGTS prebuild (Phase I) for Alaskan gas in 1987, upon projected Phase II completion. /137 The project commitment and the Alaska payback enabled Trudeau to secure a large and reliable gas market, despite the existing energy glut, and, at the same time, discredit those who claimed his export policies would drain Canadian resources without recompense.

Finally, on April 25, 1979, AGTL reached an agreement with Dome Petroleum and TransCanada PipeLines, Canada's two largest gas transmission firms, to support the prebuilt concept and Phase I construction. /138 The industry agreement, when viewed in conjunction with the NEB endorsement and U.S. commitment to full project completion, appeared to alleviate most remaining corporate, governmental or international concerns regarding ANGTS viability. The Canadian oil industry had officially consolidated its support of the ANGTS.

In Canada, Foothills required regulatory grants essentially identical to those the American sponsors - PGT on the West Leg, Northern Border on the East Leg and NWA in Alaska - were seeking from DOI and FERC in the United States: right-of-way grants from the Canadian Department of Indian and Northern Affairs (DINA) and certificates of public convenience from the NEB. The governing ANGTS document was the Northern Pipeline Act (Bill C-25), which approved the Canadian segment of the Alaska Highway Gas Pipeline Project. /139 The act, passed by the Canadian Parliament on April 12, 1978, also created a Canadian OFI, the Northern Pipeline Agency (NPA), to coordinate Canadian federal oversight of the project. The NPA's commissioner, as noted earlier, was Mitchell Sharp, a very prominent Liberal Party statesman.

NEB, throughout spring 1980, issued a series of orders authorizing ANGTS Phase I construction. On March 11, it advised the Trudeau cabinet to recommend that Parliament modify NPA's Condition 12 in the Northern Pipeline Act, which precluded any project building until all ANGTS financing - including that on the Alaska Leg - was complete. /140 The modification, necessary to enable Phase I construction, illustrated the Trudeau government's determination to promote immediate exports under the Alaska payback provision. Canada was willing to risk failed or delayed financing on the Alaska Leg to secure the Phase I prebuild, which would, within two or three years, open the U.S. midwestern and California markets to expanding Albertan gas.

However, Trudeau's Liberal government could not appear too impetuous. While the Foothills enterprise, under Blair's leadership and buttressed by his nationalism, could hardly be considered anything but a genuine Canadian enterprise, ANGTS was still largely viewed as an American initiative and Phase I, clearly, as a conduit to export natural gas south. Trudeau, in the early days of ANGTS, had suffered politically due to his bold, overt pipeline advocacy and his accommodation of the Arctic Gas consortium.

Rather than immediately approving the modification, H.A. (Bud) Olson, Minister of State for Economic Development and the Trudeau cabinet official responsible for the NPA and the ANGTS, ordered NEB hearings on the modification in order to solicit testimony from Foothills, the leading corporate actor, and other interest parties. /141 The hearings began April 29 and, by May 9, had closed. The NEB, at that time, decided to suspend its recommendation on Condition 12 amendment, required for Phase I financing, until four qualifications were satisfied:

- Credit-worthy parties must be willing to pay the mainline (Phase II) tariff.
- U.S. authorities must be willing to approve tariff tracking.
- ProGas (a Canadian company) must commit gas to the project.
- FERC must be asked to reconsider the minimum payment condition in its Northern Border certificate order, which in certain circumstances could reduce the throughput of gas in prebuild facilities. /142

On May 12, Olson arrived in Washington to discuss the Condition 12 qualifications and ANGTS Phase I with American energy officials in the Carter administration. He later reported to the Canadian Senate that he was "encouraged" by the discussions and found on all sides "an intense commitment to the project and a sense of urgency about proceeding with it as rapidly as possible." /143 In late June, both houses of Congress approved resolutions supporting the project and declaring it essential to American energy policy and sound U.S.-Canadian relations. President Carter, in a July 17 letter to Trudeau, claimed that ANGTS would be "an example to the world of how international cooperation can serve the common energy needs of both partners." /144 He expressed confidence that the project would be completed as designed.

The same day, on July 17, the Canadian government approved Condition 12 amendment. /145 It also approved a National Energy Board recommendation authorizing Pan Alberta Gas Ltd., an AGTL affiliate, to export an additional 522 million cubic feet of gas per day through the Phase I prebuild section. The Canadian prebuild, about 526 miles of pipe, was expected to cost about $662 million. Olson, at a press conference announcing Condition 12 endorsement, said construction on the Canadian West Leg would begin in August and conclude in early 1981. Canadian East Leg construction would begin in Spring 1981 and finish the following November. (See FIGURE 3-5.)

"The [Canadian] government has decided there is minimal risk of non-completion or long delay of construction of the entire Alaska Highway Gas Pipeline System," Olson remarked, although this contention differed with other pipeline speculation, such as Tussing's. "I do not believe," Olson continued, "there can be any doubt that our national interest lies in proceeding with this important undertaking at the earliest possible date." /146 Olson, perhaps striking closer to the determinate reasons for the Trudeau government's activism, noted that

Phase I sale of natural gas liquids byproducts would produce $17 billion, improve Canada's international balance of payments by about $2 billion annually, help curb inflation and stir the sluggish Canadian economy.

Condition 12 amendment was the most visible NEB authorization for Phase I construction, but there were others. In February, the Canadian Imperial Bank of Commerce agreed to finance 75 percent of the Canadian Phase I costs, a debt financing commitment to Foothills for about $498 million repayable over a 15-year period. /147 On March 11, the NEB approved this arrangement and also decided upon its IROR structure for Phase I, patterned after FERC design. On May 9, the NEB released its decision on the ANGTS tariff and financing hearings for the mainline. /148 It also approved a full cost of service for the pipeline when leave to open was granted and endorsed an IROR structure for the mainline, similar to that approved March 11 for Phase I.

Foothills began right-of-way preparation for Phase I on July 28, 1980. Construction of the 42-inch pipeline started on the West Leg's southern British Columbia section on August 4 and on the Alberta section only 10 days later. East Leg construction commenced in Alberta the following spring, on May 25, 1981. On June 15, 1981, work was initiated on the four compressor stations of the Canadian prebuild. West Leg construction was not completed in early 1981, as Olson had predicted, but instead in August. On October 1, 1981, the first Alberta gas flowed through the Phase I West Leg into Idaho. Canadian East Leg progress would be temporarily stalled by litigation on the Northern Border segment.

Perhaps the central U.S.-Canadian issue, apart from the gas swap and Phase I system development, involved procurement. The Agreement on Principles, signed by U.S. and Canadian officials on September 8, 1977, and discussed in some detail in the Second Chapter, stipulated in paragraph seven that contracting for the supply of goods and services to the pipeline would be on "generally competitive terms." /149 The joint goal, proportedly, was to ensure that suppliers and contractors of either nation had an opportunity to compete on essentially even terms.

Foothills, on April 29, 1980, completed contract commitments with The Steel Company of Canada (STELCO) and Interprovincial Steel and Pipe Corporation, Canada's two giant steel firms, for the 1.5 million tons of pipe, valued at $2 billion, for the ANGTS' Canadian portion. AGTL's Blair, a leading Foothills spokesman, had begun to arrange the deal as early as November 1978 and, by spring 1979, as U.S. and Canadian officials began to discuss reciprocal procurement policies in Ottawa, the steel pipe procurement was already decided. Foothills' unilateral award angered American steel producers, who, although unable to easily produce the 56-inch pipe, had a theoretical prerogative, under the Agreement, to enter a bid. Predictably, the U.S. Congressional Steel Caucus was disturbed by the Foothills action and wanted to ensure that American steel interests would be fully represented in the approaching U.S. pipe procurement. On October 1, 1980, the caucus asked Rhett to offer his assurances before them on Capitol Hill. /150

Since 1978, FERC and State Department officials had been working on reciprocal procurement procedures to implement paragraph seven of the Agreement. The central objective was to provide transparency in the bidding processes conducted by the sponsor consortiums: NWA, Foothills and Northern Border. /151 By January 1980, OFI procurement personnel, led by OFI's Vance and Olson, had joined and become directing staff of the FERC/State team. Draft guidelines were produced and circulated among the relevant parties. On June 10, the procedures, applicable to large-diameter pipe (36-inch or larger), compressor units and large valves and fittings, were formally agreed upon through an exchange of diplomatic notes between the two governments and signed jointly by Canadian Ambassador Peter Towe and by Deane R. Hinton, U.S. Assistant Secretary of State. /152

Generally, the procedures provided for the exchange of information between OFI and Canada's NPA on qualification of bidders, technical specifications and tendering documents, and recommendations of the sponsors on award of agreement. The procedures may be summarized in the following steps:

1 Project sponsors submit to their regulatory authority (OFI or NPA) a list of qualified bidders.
2 That authority sends the list to the other country's regulatory authority for review.
3 The project sponsors submit technical specifications to their regulatory authority.
4 They too are sent to the other regulatory authority for review;
5 The project sponsors, after receiving bids, submit a report on their decision to their regulatory authority.
6 That regulatory authority prepares a "meaningful summary" of the sponsor's report and sends it to the other regulatory authority.
7 If the other regulatory authority is not satisfied with the meaninful summary, it may raise questions informally or initiate formal consultations. /153

The regulatory authority of each country has 14 days to review and respond at each interval. Either the OFI or NPA could initiate formal consulations whenever it appears the objective of "generally competitive terms" was not being pursued. Remedies likely to result from the consultations would be contract renegotiation or bid reopening.

Rhett, greeting the Steel Caucus on October 1, had rather good news. Although U.S. firms had effectively been excluded from early consideration on Canadian pipe procurement, they proved most competitive, under the new joint procurement accords, on U.S. prebuild (Phase I) segments. /154 In fact, awards for the American section of the ANGTS prebuild represented about 500,000 tons of U.S. steel production, valued at approximately $412 million.

On September 30, 1980, only a day before Rhett's remarks to the

caucus, the Northern Border consortium announced plans to purchase 139,000 tons of steel from Bethlehem Steel Corporation, 136,000 tons from Kaiser Steel, and another 73,000 tons from U.S. Steel. These awards totalled about $300 million in contracts. The remainder of the contracts, valued at $190 million, were let to an Italian firm and a Japanese steel consortium. /155 PGT, earlier, has announced the award of all its prebuild steel pipe requirement to Kaiser Steel (61,000 tons) and Bethlehem Steel Corporation (20,000 tons), a $60 million procurement. McMillian's Northwest Pipeline Corporation, sponsors of the ANGTS-related Western Delivery System (WDS), also awarded 70,000 tons of pipe to Kaiser Steel, at a cost of about $52 million.

"The outcome of the sponsor's [procurement] decisions appear to be very favorable toward U.S. steel firms," Rhett concluded in his remarks to the caucus.

> Based upon the information provided by the private consortiums sponsoring the project, these pipe orders will provide close to maximum utilization of the available qualified U.S. capacity for wide diameter steel pipe during the next eight months....
>
> Although there are no explicit "Buy American" requirements for this project, through competitive bidding, American firms have received a substantial portion of the total steel pipe orders for the Lower 48 prebuild portions of the Alaska Natural Gas Transportation System. /156

All in all, the OFI and NPA enjoyed productive and cooperative relations under the new procurement guidelines. Rep. Eckhardt's principal objective of "equal vigilance" in the ANGTS procurement process, voiced sometime before, appeared a reality. Contracts tended, for the most part, to remain on the host side of the border, but the procurement guidelines did reduce instances of blatant national favoritism and, despite occasional disagreements, did promote cooperation among the ANGTS sponsors and between the two nations. /157

The occasional tension in U.S.-Canadian relations stemming from the Phase I gas swap arrangement and the procurement negotiations did not impede NWA and Foothills advances in Arctic gas transmission and pipeline construction technologies. Sponsor contractors, in building Phase I and while preparing for Phase II, contributed importantly to new innovations in both conventional and Arctic pipeline engineering. /158 One major enhancement to conventional pipelining was a self-steering pipe haul trailer developed in cooperation with the Canadian trucking industry. The trailer, capable of carrying three 80-foot joints of 56-inch pipe safely along both interstate highways and the rugged pipeline right-of-way, increased pipe load capacity by a third. Another conventional engineering innovation was a modified Hodder Gouger, a special revegetation device for use on the sand hill rights-of-way in eastern Alberta and Saskatchewan. High winds, shifting sands and low precipitation normally conspire to prevent seed germination in the sand hills.

The modified Hodder Gouger creates small, shallow basins in the sand where seeds may be sheltered from the wind and moisture may be trapped. A third conventional development was the pipe coat and wrap machine, which brought hydraulic operation and electronic controls into the field for large-diameter pipe wrapping. The machine is safer, faster and more effective and efficient than any predecessor.

The sponsor consortiums, often through AGTL-owned facilities, made similar strides in Arctic pipeline technology. Foothills constructed the Quill Creek Test Facility, about 200 miles northwest of Whitehorse in the Canadian Yukon, to experiment with conventional pipeline techniques under permafrost conditions. Throughout 1981, pipeline ditching, installation and insulation techniques were studied and analyzed in a permafrost environment. At a Calgary frost heave study facility, Foothills experimented with various pipeline designs to minimize or eliminate the phenomenon and produced a computer model to predict pipe effects, given certain controlling factors. In northern Alberta, a Foothills burst test facility assessed the performance of large-diameter, high-pressure pipe in a variety of Arctic stress situations.

In 1980 and 1981, as Phase I construction began and the two regulatory agencies, the OFI and the Canadian NPA, hit stride, the Canadian government became more outspoken about American reluctance to unconditionally commit itself to the Phase II or to underwrite ANGTS financing. Mitchell Sharp, the venerated senior official and NPA commissioner, voiced this frustration in Ottawa on October 19, 1980, at the Eleventh Annual Leadership Conference of the Center for the Study of the Presidency. /159

"Seldom has there been a more interesting and instructive example of the differences between the operation of the U.S. and Canadian systems of government," he explained. In Canada, Trudeau, as Prime Minister and head of government composed of Members of Parliament, could proceed with the "confidence that the decisions of his government would be supported" by the legislature. /160 This was not true in the United States, where the Carter administration could not manage Congressional behavior as well. Sharp discussed a meeting he and Olson had with Schlesinger and Congressional leaders in early 1980, which evolved into a "three-cornered negotiation" among the U.S. Congress, the U.S. [Carter] Administration and the Canadian Government.

> Ordinarily one thinks of international negotiations as being conducted between Governments...[b]ut because of the separation of powers between the President and the Congress, it became useful for both sides to supplement these conventional procedures [between the two administrations] by direct talks from time to time between Congressional leaders, whose support was essential, and the Canadian authorities. One of the reasons for seeking a Congressional resolution of support was the recognition that before financing of the Alaskan portion of the pipeline could be completed it might be

necessary for the Congress to agree to some modifications of the President's Decision recommended by the Administration. /161

Sharp closed his address with summary propositions derived from the ANGTS experience:

1 The Government of Canada, with a Parliament that has a majority of government supporters, "can implement its undertakings with respect to a joint project with greater certainty than can the Government of the United States, regardless of the composition of Congress."
2 By tradition, the governments and Parliaments of Canada honor the commitments of their predecessors. He was less certain of this in the American instance.
3 Despite "consistent and strong" support for the project on the part of the President and Congress, "the project did encounter delays, first because the Congress did not follow through with equal expedition on [wellhead pricing], without which nothing much could happen, and also because for a time...[the FERC and DOI] regulatory procedures were not geared to the urgency of bringing the project on stream."
4 It is "impossible in any legislative or treaty structure to foresee the course of economic events over a prolonged period and to make provisions in advance to meet all contingencies." Thus, without legal and administrative flexibility and the opportunity for expeditious governmental policy readjustment, international ventures, such as the ANGTS, may be undermined by subsequent events. /162

The ANGTS experience, he concluded "illustrate[s] vividly the consequences for Canada, when any joint project is to be undertaken, of the separation of powers that is so fundamental to the United States Constitution." /163 Canada, to avoid being victimized by the American power separation, has little alternative but to secure unequivocal American guarantees before entering into any treaty agreement. From a Canadian standpoint, future joint ventures would not be wise, Sharp maintained, unless the such guarantees were absolute. "Whether anything can or should be done about it [separation of powers]," Sharp concluded, "I leave to the judgment of our American neighbors."

It is essential, in any assessment of the ANGTS, to recall the fundamental differences between the American and Canadian sponsors, and the manner in which these differences might have been reflected in relations between the sponsors and their respective host governments. NWA and Northern Border were purely private sector alliances of large pipeline transmission firms, loosely allied with the Prudhoe Bay producers (ARCO, Exxon and Sohio), but exclusive of any governmental affiliation. They were major energy development consortiums, subject to federal regulation. The Foothills partnership contrasted markedly. Given its large AGTL component, it could be viewed as a quasi-govern-

mental enterprise. It was, indirectly, an agent of the Alberta province and, as such, an instrument of the state as well as an object of its regulation. Foothills had offered, for Canadian nationalists, a domestic alternative to the Arctic Gas alliance, dominated by American gas and oil interests.

Congress, in 1981, was apparently unwilling to take the bold steps necessary to insure immediate ANGTS financing and guarantee completion. McMillian, in project documents and before the FPC and the Congress, had argued before President Carter and American lawmakers that private investors would probably fund ANGTS, leaving the federal government free of any proprietary obligation. That assurance had become somewhat suspect by the time of the Runnels hearings in October 1979 and two years later, in 1981, it even more questionable, given the current and projected gas market structure and the strictures of the President's Decision. Although McMillian's initial assurances may well have been offered in good faith, his failure to deliver upon them still tended, in the Congress, to damage his credibility among some members.

The Trudeau government, on the other hand, appeared quite pleased with the Foothills consortium, led by AGTL's S. Robert Blair. Blair, as a westerner, had not always allied with the Canadian Liberal Party, but Foothills' emphasis on compensation for loss of livelihood, native relations, equal employment opportunity and the nationalization of benefits was very consistent with the Trudeau government's initiatives. Additionally, Trudeau found association with Blair and his Foothills activity politically satisfying, particularly in the West and among Canadian nationalists, who had tended to be his critics. Phase I would open a new, reliable long-term market for western gas producers and, at the same time, the payback provision would placate conservationist concerns over the depletion of Canadian gas supplies.

As noted before, government had been the traditional instrument of AGTL's success. Blair's governmental credential served as rallying point for Canadian nationalism, a powerful symbol particularly with regard to U.S.-Canadian energy affairs. In relation to ANGTS, he was seen by many as the champion and protector of Canadian national integrity. Canadian frustration over U.S. reluctance to transform ANGTS from private business to public policy may extend beyond the separation of powers to these fundamental differences in government-sponsor relations between the two nations. McMillian, on the American side, seemed to be losing White House and congressional support at the very same time Blair, as a nationalistic governmental actor, was gaining full confidence of the Canadian authorities. Canadians, perhaps, could not appreciate the U.S. government's reluctance to directly intervene on behalf of ANGTS due to its own favorable relationship with Foothills, its sponsor consortium. In supporting Blair, the Canadian government furthered many of its own objectives. This was not as true of the U.S.-NWA association. In fact, NWA's repeated failures to secure financing, after public assurances to the contrary and its rapid Alaska Leg cost escala-

tion after the President's Decision, appeared to seriously erode the original confidence placed in it by American officials.

Oversight Responsibilities

The Office of the Federal Inspector, now with its organization designed, its senior managers appointed, its staff expanding after the short hiring freeze, its funding assured and its major support contracts intact, finally began to attend the task for which it was created: consolidated project review and enforcement. OFI's oversight responsibilities fell primarily under its four program offices: Permits and Compliance, Audit and Cost Analysis, Engineering Review and Environmental Review.

Permits and Compliance was officially OFI's "one-window" office, responsible for tracking and scheduling approximately 3,000 permits required by the ANGTS sponsors, although the respective field offices admistered most day-to-day activities. (See FIGURE 3-6.) Of those 2,400 permits associated with the Alaskan segment, about 500 involved preconstruction activity and another 500 governed gravel mining on federal and state land. The remaining 1,400 permits were issued for ANGTS construction, such as permission to use water to test the pipeline's integrity, or operations, such as authorization for compressor station air emissions. /164

Reorganization Plan No. 1 of 1979 authorized the Federal Inspector to serve "as the 'one-window' point for filing for and issuance of all necessary permits, certificates, grants or other authorizations, and consistent with law, Federal government requests for data or information related to any application for a permit, certificate, grant or other authorization." /165 Under the "one window" scheme, designed by OFI's Office of Permits and Compliance, the ANGTS sponsor, such as Alaskan Northwest in for the Alaska Leg, applies with the OFI Alaska Field Office for any ANGTS permit it requires. The OFI, in turn, sends it to the appropriate regulatory agent.

> While maintaining a strict calendar, the Field Office coordinates the agencies' review, assists in the preparation of permit stipulations, resolves conflicts, and works to issue the permit within 60 days after receipt of the application. /166

The "one window" objective was to ensure federal approvals are "consistent and timely," an objective not accomplished with unconsolidated federal permit review and issuance performance during the TAPS project. In Alaska, OFI coordination was facilitated by the Executive Coordinating Committee (ECC), a panel of federal and state agencies with regulatory interest in ANGTS. Co-chaired by DOI's Bureau of Land Management and the State of Alaska, ECC's mission was to integrate federal and state actions among senior officials, administer project evaluations and serve as a forum for agency grievances.

FIGURE 3-6: Estimated Volume of ANGTS Permits

	Federal	State	Local	TOTAL*
East Leg	50	150	150	350
West Leg	10	25	120	155
Alaska Leg	1000	1400	Undetermined	2400
TOTAL				2905

* These figures:

1 Represent permits which the sponsor companies need to conduct both preconstruction and construction activities.

2 Do not include permits which th sponsors' execution contractors will need for the project. For example, Northern Border (NB) estimates 68,000 individual truck loads of steel pipe will be needed for Eastern Leg construction. Each load may require a permit. If so, the contractor hired by NB to deliver the pipe is responsible for obtaining these permits.

3 Do not include Notices to Proceed (NTP).

Source: OFI Transition Book

For the Lower 48 prebuild, the "one-window" procedure was far less defined. Usually, federal agencies delt directly with the Northern Border or PGT sponsors, providing OFI with a complimentary copies of major applications, permits and related materials. OFI's involvement, however, did appear to encourage efficient, effective federal permitting, particularly on the East Leg. /167

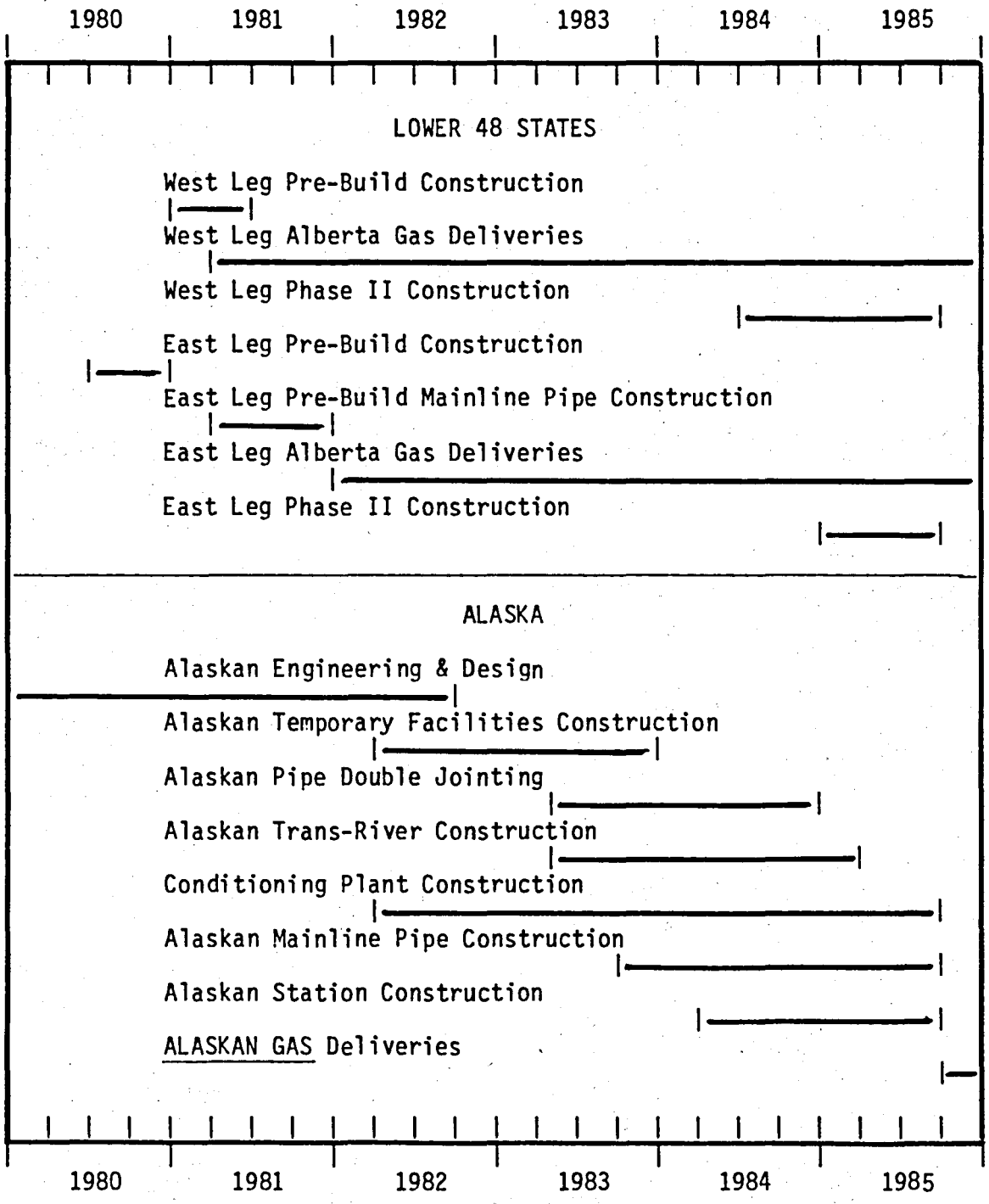
The OFI Permits and Compliance office, directed by Toskey, had a second major responsibility: monitoring the ANGTS construction schedules. It was the Federal Inspector's responsibility, by the President's Decision, to report any "existing or potential failures to meet construction schedules or other factors which may delay the construction and initial operation of the system." /168 (The original ANGTS project schedule is summarized by FIGURE 3-7.) All three ANGTS construction schedule systems for the U.S. legs were different. On the West Leg, PGT's schedule system was manual, a composition of graphs and bar charts. Northern Border used a detailed computer program for schedule analysis and control on the East Leg. In Alaska, NWA proposed a very sophistocated two- or three-tiered approach to schedule analysis. OFI personnel, by one means or another, developed methods to monitor the three construction schedules. Toskey, as office director, was assisted by Robert Mosher, responsible for permits management, and Larry Ouellette, director of the compliance division.

The OFI Audit and Cost Analysis office, directed by Berman, pioneered two regulatory innovations: the Incentive Rate of Return mechanism, discussed above, and regular, ongoing audits of project costs for periodic rate base inclusion. Both initiatives were frequently recommended in the various TAPS critiques. Berman, to implement and administer these innovations, relied upon two senior assistants, John Templeton at headquarters and Irvine-based Richard Otier.

The IROR, formulated by the FERC, was to be administered by Berman's OFI staff. A central aspect of its administration was the evaluation and approval of the Certification Cost and Schedule Estimate (CCSE), the lynchpin of IROR machinations. If the CCSE was approved at a value too low, the company's actual construction costs would perhaps exceed it and the subsequent rate of return on investment would be insufficient. However, if it was set too high, actual costs would probably fall short of it and the rate of return would be disproportionately increased. The establishment of the CCSE, therefore, involved considerable gamemanship.

On July 6, 1980, NWA filed its CCSE, set at $7.9 billion in 1980 dollars, in its 33-volume final certificate for the construction of ANGTS' Alaska Leg. Berman and Adger, the FERC's Alaskan Delegate, began immediately to assess its validity, with the contracted assistance of Williams Brothers Engineering Company, of Tulsa, Oklahoma. To this end, Berman and Adger conducted a series of seven conferences in autumn and early winter 1980 to discuss the CCSE concept, cost inclusion criteria and the final Alaska Northwest CCSE. /169 After gathering and

FIGURE 3-7 : Initial Project Schedule



Source: OFI Quarterly Report # 4, July 17, 1980, p. 9.

assessing comments for three months and preparing their analysis for five months more, the two officials, on August 21, 1981, issued a final report on the Alaska Leg CCSE. /170

The report, based in part upon a Williams Brothers audit, recommended that FERC approve a $6.73 billion CCSE for the Alaskan Leg, considerably less than the $8.13 billion to which NWA had revised their 1980 CCSE filing. As part of this reduction, the report advised FERC to defer consideration of several portions of the Alaska Leg CCSE, totaling about $887 million, until after NWA provided additional information on the design of its communications system, affirmative action plan and overall management plan. Finally, Berman and Adger recommended a 1.2 Center Point for IROR calculation, providing a 20 percent allowance for unforeseen, uncontrollable circumstances. The sponsors had requested 1.28, or a 28 percent allowance.

As the commission studied the Berman-Adger recommendations, NWA acted on November 20, 1981, to strengthen its case for a higher CCSE, by filing a supplement to its July 1980 certificate filing which raised its CCSE request by about $373 million to $8.55 billion. /171 NWA's Center Point estimate, however, was revised downward slightly from 1.28 to 1.267 still well above the 1.2 Berman-Adger recommendation. The FERC issued an Order on December 9, 1981, to reconvene technical conferences to consider the new material. These conferences closed with an April 16, 1982 report advising that the Alaska Leg CCSE be adjusted upward to $7.1 billion, based upon the latest NWA filing (November 1981) of $8.55 billion. /172 That September, however, the FERC would approve $6.9 billion of the $8.55 billion NWA request - along the lines of the Berman-Adger recommendations - and settle with the Berman-Adger Center Point recommendation of 1.2. /173 At that time, the FERC would also defer about $891 million of the estimate involving highway repair, government monitoring, affirmative action training, socioeconomic impacts, project management and Alyeska data acquisition.

NWA, disappointed with the commission's ruling, applied for a rehearing on October 21, 1982. /174 About five months later, on February 18, 1983, a rehearing was granted. After reconsideration, NWA's CCSE was increased from $6.9 billion to $7 billion, with about $900 million still deferred pending further information on July 21, 1983. /175 About $600 million has been disavowed, with and since the FERC's September 1982 determination, from the CCSE. The FERC would not increase its earlier 1.2 Center Point decision. Although NWA may continue to press for inclusion of the $900 million in deferred status, the July 23 FERC order is presently the basic governing document on Alaska Leg CCSE.

Berman's Audit and Cost Analysis office was also responsible for reviewing changes to the FERC CCSE on the East Leg. In spring 1980, FERC had approved $1.062 for Northern Border's CCSE before authorities shifted over to the OFI. On December 3, 1980, Northern Border submitted a three-volume filing which estimated final costs for the East Leg Phase

I prebuild at $1.239 billion - an increase of $177 million over the FERC-approved CCSE. /176 Early the following year, on March 20, 1981, the OFI issued design approval for the East Leg prebuild, which enabled construction to begin. /177 The OFI also recommended marginal adjustment to the CCSE, to $1.238 billion. /178

Apart from assuring CCSE integrity with Adger, Berman's primary responsibility as director of the Audit and Cost Analysis office was, to validate, in concert with his cost and progress monitoring, sponsor requests to incorporate costs into the project rate base. On the East and Alaska Legs, an incremental review process was designed and implemented to assess and approve sponsor submittals on a quarterly basis. Thus, the Northern Border and NWA consortiums would not have to wait for project completion for rate base determination, although, by the President's Decision, they would have to delay consumer billing until project completion. Each quarter, the sponsor would submit accummulated costs to Berman's office, which would determine if they were "prudently incurred" and thus acceptable for rate base inclusion. OFI, as noted earlier, was assisted in this continuous audit responsibility by Main Hurdman, the accounting consultancy. /179

As noted earlier, both West Leg and East Leg prebuild sections were constructed on or under budget. The Final Design Cost Estimate for Phase I of the West Leg was $167.8 million, but construction was completed by October 1, 1981, at a cost of about $165 million. /180 The East Leg prebuild was finished about a year later, on September 20, 1982. On December 3, 1982, Berman issued a tentative rate base determination on the section, based primarily upon FERC reports and Main Hurdman's recurring audits until that time. /181 His allowance of $1.02 billion was approved by Rhett in a final determination, issued September 7, 1983. /182 In the end, and with regard to IROR machinations, Northern Border's actual construction costs totaled nearly $1.131 billion (or $908.5 million in 1979 dollars) - still millions less than the CCSE Project Control Estimate of $1.238 billion. /183

At first glance, this substantial difference appears to suggest that the IROR mechanism did work as intended to reduce East Leg prebuild construction costs. However, Berman and others associated with ANGTS oversight are less confident in that conclusion. One must remember that the IROR is driven by the CCSE, a preliminary estimate of costs which actual cost performance is measured against. If the preliminary CCSE estimate is inflated at the outset, a significant "underrun" could result from the IROR formulation regardless of the quality of management performance. In other words, apparent IROR success could be attributed, at least in part, to a firm's skill at initial CCSE gamesmanship rather than to its actual cost control performance during construction. This issue will be examined more closely later, as the East Leg experience is studied in greater detail.

In Irvine, California, OFI's two largest program offices, Environ-

mental Review and Engineering Review, shifted their oversight activities into high gear. The Environmental Review Office, led first by Lawrence Birke and later by Earl Kari, EPA's AAO, defined its responsibilities in five parts:

- Monitor environmental field programs.
- Review and approve those portions of the project design which raise important environmental questions.
- Conduct field inspections during pipeline construction.
- Ensure reasonableness and applicability in regulations imposed upon project sponsors.
- Keep other federal agencies and private environmental groups appraised of ANGTS status, activities and OFI's environmental determinations. /184

The Environmental Review office was successful in forming a core of bright, capable staffers, which included environmentalists David Critchfield and Gregory Peck, both based in Washington, and W. Lewis Pamplin, a fish and wildlife biologist in Anchorage.

The project sponsors, particularly NWA, had begun collecting environmental data long before ANGTS sponsor selection in 1977, usually in concert with EIS preparation. Mountains of quantitative and descriptive data had been accummulated on fisheries populations; mammalian populations; raptorial birds and migratory waterfowl; endangered species; vegetative types and soil characteristics; surface and ground water quality. A central aspect of the OFI's environmental mission was to focus the sponsor's field program effort on only the essential data, reducing its compliance burdens and utilizing the Federal Inspector Management Information System (FIMIS), conceptualized by Touche Ross and implemented by the two OFI ADP contractors, for reporting purposes.

Although design review for the ANGTS East and West Leg sections was rather conventional, the Alaska Leg provided a considerable regulatory challenge. OFI's environmental design review concerns in Alaska emanated primarily from DOI's Right-of-Way grant stipulations, which could be conceptually divided into two parts. The first part involved 25 environmental and engineering plans, known as the "1.6.1 Plans," required to ensure overall integrity of the project. They are listed in FIGURE 3-8 and aggregated by status, as of October 1983. The plans, as one OFI document explained, "range in complexity from brief descriptions of measures to minimize pipeline corrosion to comprehensive oil spill prevention plans." /185 Once approved by OFI, the plans would be implemented by NWA during construction and enforced by the sponsor's quality control/quality assurance program, monitored by OFI.

The second part of the DOI Right-of-Way grant stipulations were those associated with the Notice-to-Proceed applications. To supplement the 1.6.1 plans, NWA was responsible for submitting these applications to begin work which addressed the following construction catagories for

FIGURE 3-8: Status of Alaskan Leg DOI Stipulation (1.6.1) Plan Review

° FINAL APPROVAL GRANTED[1]

1 Air Quality
2 Blasting
3 Camps
6 Cultural Resource Preservation
7 Environmental Briefings
10 Liquid Waste Management
11 Material Exploration and Extraction
12 Oil and Hazardous Substances Control, Cleanup and Disposal
14 Pesticides, Herbicides and Chemicals
19 Solid Waste Management
22 Visual Resources
24 Seismic
25 Human/Carnivore Interaction

° PLANS BEING PREPARED, REVISED OR UNDER REVIEW[1]

18 River Training Structures

° PLANS DEFERRED UNTIL REMOBILIZATION[1]

(1) Detailed Outlines Conditionally Approved

5 Corrosion Control
8 Erosion and Sedimentation Control
17 Restoration

(2) Others

4 Clearing
9 Fire Control
13 Overburden & Excess Material
15 Pipeline Contingency
16 Quality Assurance/Quality Control
20 Stream, River & Floodplain Crossing
21 Surveillance and Maintenance
23 Wetland Construction

---

1 Numbers conform to 1.6.1 Plan numbers. Status as of September 30, 1984.

each pipeline spread:

- ° Clearing, grading, workpad construction and revegetation.
- ° Special stream and river crossings.
- ° Pipeline construction and revegetation.
- ° Hydrotesting and final tie-in.

The Notice-to-Proceed applications contained a design, an environmental assessment of the design, a construction plan and all permit applications needed for pipeline construction approval. NWA estimated that OFI had to review approximately 51 applications associated with the the Alaska Leg pipeline itself and another 20 for the compressor stations and communications systems. /186

Once construction began, as it did on the West Leg in December 1980 and on the East Leg in May 1981, OFI Environmental Review staff switched its regulatory stance from prevenient design review to concurrent field inspection. OFI field inspection activities were governed by three basic principles:

1 Only designated OFI field employees could issue "stop work" orders, to alieviate misunderstandings or confusion among sponsors or sponsor contractors.
2 OFI would not duplicate quality assurance/quality control (QA/QC) functions already being performed by the sponsors. Instead, OFI personnel would only monitor and spot-check sponsor QA/QC activities.
3 OFI would negotiate field monitoring agreements with affected state governments, Alaska in particular, to avoid redundant regulatory activity.

A fourth responsibility, after field program monitoring, design review and field inspection, was identified as in-depth analysis of permit requirements to ensure reasonableness and applicability in regulation. In a sense, this was OFI's attack on "regulatory unreasonableness," the imposition of often inappropriate, excessive requirements on private enterprise. /187 The Environmental Review office hoped to assess the monetary costs and environmental benefits associated with various ANGTS permit stipulations and examine the efficacy of single regulation, particularly of water pollution and hazardous wastes, whenever federal and state regulatory jurisdiction overlapped.

Birke, a former executive director of the Northwest Pulp & Paper Association, was familiar with the often heavy hand of regulatory government. During his short tenure, he hoped to identify and eliminate superfluous oversight requirements. Birke's replacement was career EPA biologist Earl Kari, perhaps somewhat less concerned with reducing regulatory excess than with enforcing regulatory authority. He did not, however, see Rhett's approach as inconsistent with his own, and consequently, the Federal Inspector's disposition for balanced evaluation was

not lost on the Environmental Review leadership or staff.

Finally, the office reported any project developments affecting environmental quality to interested parties, the ANGTS departments in particular. Usually, this was accomplished through standard public information channels, such as staff reports and press releases. The office did conduct semi-annual briefings and recurring updates to agency AAOs. In addition, Rhett pursued an initiative of the original EPB, led by Martin and Fearnsides, for the creation of a Citizens' Environmental Advisory Committee (CEAC). The CEAC, as first conceptualized, served both internal and external functions. It was to provide an expert forum for agency counsel on major environmental issues and to transmit ANGTS information and OFI policy determinations throughout the environmental community. However, as the CEAC idea slowly edged toward reality in 1981, it was postponed due to the Phase II suspension.

An Environmental Monitoring Committee, a predecessor to the CEAC, was endorsed by the original ANGTS EPB, led by Martin and Fearnsides, as early as summer 1978. /188 The EPB began to draft, in consultation with leading environmental groups, an advisory committee charter. Rhett, appointed in summer 1979, continued the initiative. He was determined to avoid the environmental loggerhead that had frozen TAPS construction. The reconstituted EPB was assigned as the CEAC organizing agent, to complete the charter and lead CEAC member selection, and the Federal Advisory Committee Act (P.L. 92-463) identified as an instrument for CEAC creation. Three environmental groups, the Sierra Club, the Wilderness Society, litigants in the TAPS stalemate, and the Audubon Society, became involved with the CEAC from its inception. The groups initially hoped to extend the CEAC's consultative purview to the entire ANGTS, but Rhett limited it to the Alaska Leg.

By July 1980, the CEAC charter was completed and all procedural clearances and filing requirements had been met. On June 20, 1980, OFI issued a "call for [CEAC] nominations" in the Federal Register for appointments to the five-member panel. /189 By mid-August 1980, at the close of the nominating period, 29 individuals, most of them Alaska residents, had been nominated for the CEAC. Rhett, in consultation with the President's Council on Environmental Quality (CEQ) and after preliminary screening by staff, narrowed the list to 16. /190

In 1981, however, the CEAC initiative faltered. On June 17, 1981, NWA announced a one-year slip in Alaska Leg construction, which dropped Phase II completion back to the winter of 1986-87. The NWA announcement also foreshadowed future delays and cast the Alaska Leg into general uncertainty. Rhett, the ever-efficient public manager, saw no reason to institute and fund the CEAC without prospect of impending Alaska Leg construction. He withheld his committee appointments and, in July 1981, decided to suspend CEAC creation indefinitely.

Of the four OFI program offices, oversight responsibilities probably

fell most squarely on Engineering Review, directed by Bill Black from OFI's Irvine offices, than any other. It was the lead office for ANGTS criteria development and design review. Black and his staff held principal supervisory authority over UII, OFI's prime technical support contractor, and led the Cold Regions Engineering Technical Committee (CRETC). Black, during the TAPS effort, had served as a chief consultant to Alyeska and probably no one - anywhere knew more about the technical aspects of the oil pipeline project and the lessons that could be learned from it as he. Black, due to this expertise, was granted considerable executive discretion, and perhaps no office director enjoyed Rhett's confidence more.

Black focused his attention and concern on Alaska. Pipeline engineering on the two lower U.S. legs, as noted above, was rather conventional, required little special oversight and would be supervised by the field offices. As the Engineering Review staff explained in an official document:

> The Alaskan Leg, however, traversed arctic or subarctic conditions for its entire length. Due to geological and climactic conditions, existing codes and requirements do not adequately cover all problem areas. For these problems, new and unique procedures and designs must be developed by the sponsor. The new procedures range from establishing the level of effort needed for subsurface exploration, hydrologic data collection, and field testing, to developing new construction modes and techniques to accommodate the conditions encountered along the pipeline. /191

The statement continued:

> Due to the pioneer nature of the work, the potential for schedule slippage and cost increases is high. The engineering organization has been planned and is being staffed not only to evaluate and approve the pioneer efforts required, but also to participate in their development to reduce the chances of schedule or cost upsets to the barest minimum.

The Engineering Review office's philosophy, very consistent with Rhett's, could be summarized in four points:

- Emphasis on prospective review and "early interaction with the sponsors."
- Concentration on issues "critical to system reliability or [that] may have a large cost impact...."
- Reliance on standard regulations and codes for East Leg and West Leg oversight.
- Utilization of knowledge gleaned from the TAPS experience. /192

The office's primary oversight responsibilities involved ANGTS design review (perhaps its major preconstruction task), Arctic engine-

ering, and construction oversight of the lower 48 prebuild. It also monitored resolution of the TAPS proximity question and major sponsor studies, the girth weld flaw assessment and the borehole drilling program in particular.

Initially, design review attention focused on the NWA certificate filing, as an outline of things to come, and the lower 48 designs. OFI, however, did very little design review of any kind until autumn 1980, after UII had opened and staffed its Irvine offices and after Black was hired as office director. By April 1981, however, the Alaskan sponsor consortium provided the Federal Inspector with an overall plan which envisioned a two-year to three-year review process. Under the NWA scheme, OFI would first counsel the sponsors on the general suitability of its design criteria, presented to OFI as 30 discrete chapters of a "Design Criteria Manual." The manual would also include a number of site-specific designs for unconventional ventures, such as major river crossings. /193 In a second stage, immediately before Phase II construction, OFI would assess the detailed designs themselves.

On June 1, 1981, NWA submitted its first drafts of certain manual sections to the OFI's Engineering Review office for review. The Federal Inspector, to facilitate manual review, established a Design Review Board, which consisted of members of the Alaska State Pipeline Coordinator's Office (SPCO) as well as the OFI and UII. By January 1982, the review board had completed its initial review of the documents and had returned its comments to the NWA. The manual sections were resubmitted on May 4, 1982, along with technical reports on frost heave, mainline pipe specifications, fracture control and fault crossing. They would be approved by autumn.

Despite project slips of summer 1981 (one year) and spring 1982 (two to three additional years), NWA submittals continued. With East Leg and West Leg activities near completion, OFI's Engineering Review staff found additional time to dedicate to design oversight. By summer 1983, 22 of the 30 Design Criteria Manual sections had been revised and approved. /194 By autumn, all but one section, on Design Modes, and the frost heave appendix would be final. /195 (See FIGURE 3-9.)

The Arctic engineering initiative centered about the Cold Regions Engineering Technical Committee (CRETC), the panel of Arctic engineering experts convened by the U.S. Army Corps of Engineers in December 1979 to advise OFI and NWA on major technical problems. The CRETC, under the auspices of the Engineering Review office, began its consultations immediately. In early 1980, its members examined detailed data from Arctic test sites to outline likely frost heave scenarios and to suggest mitigative engineering designs. Frost heave is an Arctic geological phenomenon which may result when chilled gas is transported in a nonpermafrost environment. A layer of ice often forms beneath the chilled pipeline, under certain soil/water conditions, either lifting the pipe out of the ground ("jacking") or severely straining its walls. The

FIGURE 3-9: Status of Alaskan Leg Design Criteria Manual Review

° FINAL APPROVAL GRANTED[1]

Pipeline

1 Table of Contents
2 Introduction
3 Design Basis & Considerations
4 Earthwork Estimates & Haul Analysis
5 Material Sites
6 Spoil Disposal
7 Access Roads
8 Storage Yards
9 Workpad Design
10 Clearing
11 Drainage and Erosion Control
12 Restoration
14 Bridges
15 Road Crossings
16 River, Stream & Wetland Crossing
17 Fault Crossings
18 Mainline Pipe
19 Pipeline Welding
20 Stress Analysis
21 Geotechnical/Geothermal Analysis
22 Mainline Valves
23 Pig Launchers & Receivers
24 Gas Take-Offs
25 Pipeline Appurtenances
26 Fittings
27 Insulation
28 Foreign Pipeline Crossings
29 Hydrostatic Testing
30 Corrosion Control

Auxiliary Facilities

* Compressor and Meter Stations
* Telecommunications

° FINAL APPROVAL PENDING[1]

Pipeline

13 Ditch Configuration
21A Frost Heave Design Criteria & Methodology Appendix

---

1 Numbers conform to chapters in the Design Criteria Manual. Status as of September 30, 1984.

implications for pipeline integrity and safety are rather obvious. NWA's task was to identify locations along the route which appeared conducive to frost heave and to develop a strategy to counter or eliminate its effects.

In late 1980 and early 1981, NWA established a series of frost heave test sites along the ANGTS Alaska route and organized a CRETC-like committee of its own experts to provide internal counsel. The CRETC, which had hoped initially to guide NWA research as well as monitor and critique consortium studies, had to satisfied with a reduced role from the sponsor's standpoint, although it remained the Federal Inspector's principal technical advisor on the ANGTS's most pressing Arctic issue. Panel interests also spread to sponsor studies on slope stability, ditching and blasting.

Over the next couple years, the CRETC would meet 10 times to review NWA's evolving frost heave design criteria and methodology, for inclusion in the Design Criteria Manual. In August 1983, the panel submitted its final report to Rhett, who concluded that "NWA's pioneering work in this area [frost heave] had resulted in a credible plan that will probably be confirmed by completion of NWA's testing program." /196 On September 15, 1983, OFI conditionally approved NWA's frost heave design criteria and mitigative strategy. Approval was conditioned upon sponsor completion of data verification and validation of the computer simulation, which would continue into 1984.

When West Leg prebuild construction began on December 11, 1980, OFI engineers from Bellarts' field office staff were on site. However, since the San Francisco staff was so small, the office of Engineering Review occasionally supplemented the West Leg field presence. This was also true for the Northern Border pipeline, particularly with regard to technical assistance and special studies.

OFI's Engineering Review office had a spectator's role in the TAPS proximity alignment, debated primarily by NWA, the Alyeska Pipeline Service Company and DOI. Provisional approval of the ANGTS's Alaska route, issued June 13, 1979, was contingent in part upon a detailed analysis by NWA of re-routing suggestions offered by Interior officials, concerned about ANGTS's location near the TAPS pipeline. In 1980, NWA agreed to several realignment changes, which reduced from 65 to 23 the number of times which ANGTS would cross TAPS. /197 Under the NWA revision, the ANGTS would run parallel to TAPS for 300 miles rather than 450 miles, as originally planned, and for only 180 miles while the TAPS was above ground. NWA also agreed to a minimum separation of 200 feet - more than twice as long as the initial 80-foot distance.

These adjustments appeared to satisfy Alyeska, which signed a mutual liability and indemnification agreement with NWA for accidents occuring along the joint right-of-way and who established an organization unit, the ANGTS Relations Division, to represent their concerns in

ANGTS circles on project design, planning and construction. /198 The Alyeskan panel worked closely with NWA throughout 1981 in a series of studies which examined haul road integrity and the effects of blasting. By 1982, the proximity issue was largely resolved.

Not all OFI activity, however, was confined to the four program offices. As noted earlier, the Office of Administration led OFI's major procurement and FIMIS initiatives. Rhett's EEO/MBE office promoted affirmative action within the OFI and among the ANGTS sponsor and contracting organizations. Another program, directed by the Federal Inspector but staffed in part by DOI's Heritage Conservation and Recreation Service (HCRS), aimed to protect the cultural resources associated with the pipeline right-of-way. And, of course, all of these actors and activities came together to some extent on the West Leg prebuild, as ANGTS construction began and OFI became an active enforcement agent.

Rhett, as noted above, was quick to establish his EEO program, particularly the internal dimension associated with OFI hiring and discussed earlier. The central EEO/MBE thrust, however, was external, related to ANGTS sponsor and contractor activity. The external EEO/MBE initiative was launched on October 12, 1979, when proposed regulations, "Requirements for Equal Opportunity During Construction and Operation of the Alaska Natural Gas Transportation System" were published in the Federal Register for comment. /199 Final regulations, drafted to assure that firms building the project did not engage in discriminatory personnel practices, were issued on May 9, 1980, and published a day later. /200 Thereafter, the ANGTS sponsors for each leg set about the task of developing AAO/MBE plans which conformed with the OFI regulations.

OFI's first report on NWA's MBE activity, issued in summer 1980, indicated that the Alaska Leg sponsors appeared to take the ANGTS's minority business initiative seriously: by mid-1980, about $9.4 million of a projected $63.3 million, roughly 20 percent, in ANGTS contracts was secured by minority or female businesses. /201 This standard would not quite be reached on the Lower 48 prebuild. On January 29, 1981, the East Leg affirmative action and minority business contracting plan was the first to be approved by OFI. /202 The Northern Border plan targeted ten percent (about $20 million worth) of its contractual opportunities for MBE-qualified firms and another one percent ($2 million) for female-owned companies. Pacific Gas Transmission's plan for the West Leg was approved by OFI about a month later, on February 26, 1981, with an identical 10 percent share. /203 PGT, however, would show 17.1 percent MBE participation during 1980 and 1981, supporting Rhett's contention that the sponsors would exceed their EEO/MBE goals. On August 13, 1981, NWA's affirmative action plan for employment and procurement on the Alaska Leg was endorsed by the OFI. /204 The plan represented the consortium's third revision since September 1980 and set a 15 percent MBE participation goal. The goal for female firms was two percent, while minority hire targets ranged from 14.9 percent for craft workers to 21.5 percent for laborers.

EEO/MBE performance on the ANGTS prebuild appears rather good, when the central nature of the ANGTS enterprise, transcontinental gas pipelining, and the routes, the Pacific Northwest and North Central United States, are considered. Although many minority firms existed to contend for support contracts, there were too few qualified minority businesses to compete successfully for technical ANGTS activities. Furthermore, minority workers were not alway available in these areas for ANGTS jobs. Quite simply, it may have been unrealistic to expect greater minority business or labor participation in a construction undertaking of this type.

The OFI cultural resource program was intended to preserve archeological sites along the pipeline route, particularly those through Indian lands, without delay of ANGTS construction progress. Reorganization Plan No. 1 of 1979, among its many other specifications, transfered from Interior agencies various enforcement responsibilities for historic and archeological preservation to OFI. /205 Most of cultural resource activity for Phase I would be along the East Leg, where a new right-of-way was being established. Northern Border, the East Leg sponsor, was aware of its legal obligations for cultural resource preservation and, in autumn 1979, entered into contracts with several archeological consultants to develop and implement a suitable plan.

On February 13, 1980, the Advisory Council on Historic Preservation (ACHP) signed a Memorandum of Agreement (MOA) with Northern Border and state historic preservation officers from the five states - Montana, North Dakota, South Dakota, Minnesota and Iowa - over which the East Leg traversed. /206 This provided the basic framework for cooperative, coordinated archeological review. The following month, OFI contracted the services of ACHP to establish an OFI cultural resource program, led by Charles McKinney, an DOI archeologist. OFI, through an interdepartmental fund transfer, would pay ACHP about $140,000 annually during ANGTS construction for its counsel. The ACHP arrangement, like so many others, reflected Rhett's preference to contract for expertise rather than building it up internally. The OFI/ACHP alliance would last until late 1981, when OFI archeologist Steve Chomko and William Butler, a National Park Service archeologist temporarily assigned to OFI, assumed responsibility for OFI's East Leg cultural resource activities.

In autumn 1980, as ACHP and Northern Border archeologists began to attend their work, the North Dakota Public Service Commission (NDPSC) rejected the sponsor's East Leg pipeline route, already approved by the President's Decision, and refused to grant a state right-of-way certificate. Shortly after, on September 26, 1980, OFI and FERC filed suit against the NDPSC, and archeological study in the state came to a sudden halt. The case, which will be detailed in the following section, was decided in the federal government's favor in November 1981, allowing cultural resource work to continue and construction to begin again about a year later.

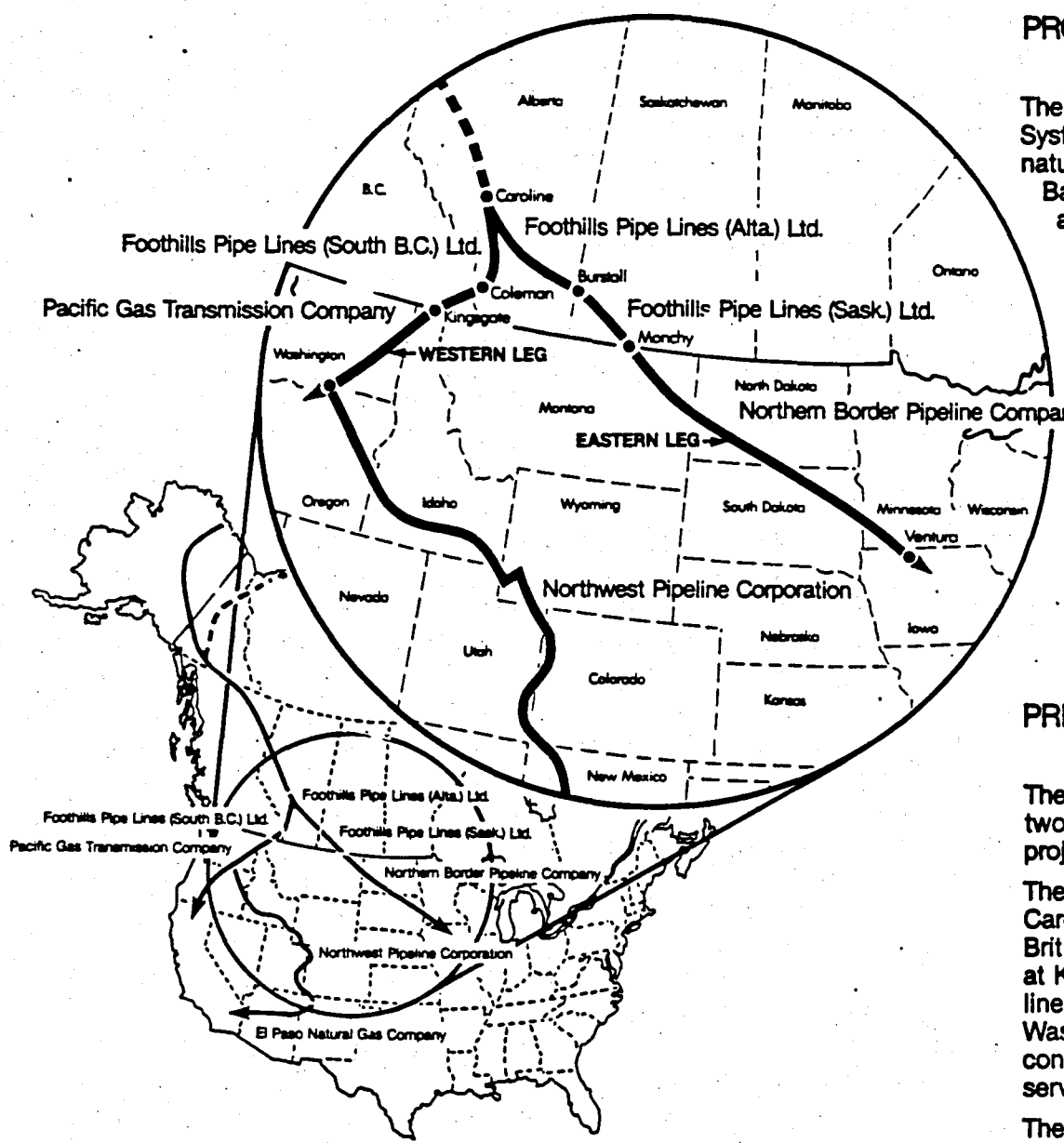
During 1980 and 1981, project archeologists tested 176 sites along the East Leg route, at a cost of $2.4 million, to determine the archeological or historical significance of resources discovered. /207 Eleven sites were judged eligible for nomination to the National Register for Historic Places and one, the Mondrian Tree Archaeological Site in North Dakota, was judged a very significant find. Mondrian Tree yielded the longest known continuous cultural record of the Northern Great Plains area, from about 2000 B.C. through 1500-1800 A.D. /208 Students from the University of North Dakota conducted much of the survey and excavation work at the site, about 200 feet wide and 500 feet long and located on the south side of the Missouri River crossing near Williston, N.D. Such sites were avoided if possible. If rerouting was infeasible, mitigation was conducted.

OFI's oversight of cultural resource programs is rather difficult to assess since the quality of review is seldom immediately apparent. Whether the sponsors successfully mitigated the impact of construction on an important archeological site will be determined only by time. By two general measures, however, the OFI's East Leg effort was viewed internally as a success: first, OFI assured that Northern Border essentially conformed with the relevant legislation and second, not a single construction day was lost to cultural resource delays. /209

Overall, the NBPL cultural resource program was exceptional, in both scope and comprehensiveness. But Chomko and Butler did identify a few problems. Primarily, they claim that sponsor archeologists failed to devote sufficient time to preliminary research design and delayed their field activities for too long, thereby undermining planning and increasing archeological costs. Second, Northern Border was hesitant to shift the route to avoid sites and, consequently, additional time and money was required for mitigation of eligible sites. Third, rigid channels of authority and communication in the field often complicated and prolonged cultural resource determinations. For an oversight agency such as the OFI to meet its dual missions of regulation and expedition, Chomko and Butler maintain, the field archeologist must have more discretion to deal directly with the sponsors and make more timely determinations in the field. /210

OFI's first field enforcement challenge came during PGT construction of the ANGTS West Leg prebuild, which consisted of four 36-inch diameter pipeline "loops" running parallel to an existing Pacific Northwest pipeline. This West Leg Phase I construction also included six compressor stations and a meter station, which stretched 160 miles from northern Idaho through Washington into northern Oregon. (See FIGURE 3-10.) Phase II, to be completed later during Alaska Leg construction, consisted laying the remaining 727 miles of the West Leg to create a second parallel line from the British Columbia-Idaho border to Antioch, California, near San Francisco. PGT, the PG&E subsidary, would build all of Phase I and those Phase II sections in the Pacific Northwest.

FIGURE 3-10: The Phase I Prebuild



Source: "Information on Canadian Natural Gas Imports and the Alaska Natural Gas Transportation System," Foothills Pipe Lines, November 1983.

Prebuild System

PROJECT PURPOSE

The Alaska Natural Gas Transportation System (ANGTS) will transport Alaskan natural gas by pipeline from Prudhoe Bay on Alaska's north slope, south across western Canada, to U.S. markets in California and the mid-western states. In doing so, the project will provide secure, long-term supplies of fuel for these areas.

The Prebuild facilities were approved for construction as the first phase of the total ANGTS project and currently transport specifically approved short-term exports of Canadian natural gas to these market areas.

PREBUILD ROUTE

The ANGTS Prebuild consists of the two southern legs of the total ANGTS project.

The Western Leg runs southwest from Caroline through southern Alberta and British Columbia to a border crossing at Kingsgate. From the border, the line moves south through Idaho, Washington and into Oregon where it connects with existing systems to serve California.

The Eastern Leg extends from Caroline, Alberta, southeast through southeastern Alberta, into Saskatchewan and on to the Canada/U.S. border crossing at Monchy. From the border, the line proceeds through Montana, North and South Dakota, and Minnesota to Ventura, Iowa, where it connects to existing pipeline systems in the mid-western states.

As noted earlier, Rhett appointed Leo Bellarts, western division head of the Naval Facilities Engineering Command at San Bruno, California, as OFI's West Leg director on March 16, 1980. Fifteen days later, Bellarts established the OFI San Francisco Field Office, which would provide direct surveillance of West Leg prebuild construction. Bellarts was not a stranger to Western pipelining. Three years before, he had served as engineering director for the design of the Naval Petroleum Reserve's Elk Hills project, a 167-mile crude oil pipeline across California from Elk Hills to Rialto. /211

The West Leg prebuild consisted of the following segments:

- Loop 1: 40.8 miles in northern Idaho
- Loop 2: 71.3 miles in eastern Washington
- Loop 3: 26.0 miles in southeastern Washington
- Loop 4: 22.1 miles in southeastern Washington and northeastern Oregon

- Compressor Station 3: Eastport, Idaho
- Compressor Station 4: Samuels, Idaho
- Compressor Station 5: Athol, Idaho
- Compressor Station 6: Rosalia, Washington
- Compressor Station 7: Starbuck, Washington
- Compressor Station 8: Wallula, Washington
- Meter Station: Stanfield, Oregon /212

The OFI had preliminary design review requirements on the West Leg very similar to those addressed by its Environmental Review and Engineering Review offices on the Alaska Leg, specified in FIGURES 3-8 and 3-9 above. They resulted, in large part, from the original EPB's attempt to design identical or generic stipulations for all the U.S. ANGTS legs. In fact, as John A. Sproul, the PG&E executive, had complained at the Runnels hearings, West Leg requirements were so similar to Alaska Leg stipulations as to be unfair and excessive for conventional pipeline construction, such as that proposed by PGT.

PGT's right-of-way grant for the West Leg prebuild was issued on March 12, 1980, four days before Bellart's appointment and three weeks before the San Francisco office opened for business. After nearly nine subsequent months of design review and approval, OFI issued a Notice to Proceed on December 8, 1980, for construction of the four pipeline loops. PGT construction began two days later. On January 20, 1981, OFI issued a notice for the first four compressor stations and, on February 20, a notice for the remaining two compressor stations and the Stanfield Meter Station.

Federal coordination on the West Leg was not as smooth as one might suspect, given the preestablished right-of-way and the OFI's clear authority to direct oversight. /213 Guy Martin, an Interior assistant secretary and the department's representative on the original EPB, claimed

that DOI, by 1979, had reconciled itself to OFI's administration of his department's ANGTS mission. This acceptance, however, did not extend to the department's Bureau of Land Management (BLM). BLM officials in Washington refused to abandon their traditional prerogatives on right-of-way enforcement. In fact, an official agreement was never reached with BLM, although an understanding was reached with the bureau to allow it, and U.S. Forest Service, to enforce the grant over federal lands. Most relations with regional offices - EPA, Transportation, the Corps, and DOI's Heritage Conservation and Recreation Service (HCRS) - were productive and cordial.

OFI West Leg oversight was conducted primarily by two engineers, Joseph Tolly and Daynor Owens, and environmental scientist Richard Russell. Occasional support was secured from other OFI offices, associated federal agencies and UII contract personnel. Consequently, field surveillance responsibilities rotated, with Tolly, Owens and Russell constantly shuttling between various construction sites along the route. Rhett believed, as noted earlier, that OFI's oversight should be organized much like a QA/QC program, with OFI ensuring that sponsor review systems were working rather than trying to provide comprehensive first-hand surveillance. Oversight, even in this secondary sense, was not always easy. Responsibilities were complicated by ambiguous permit stipulations frequent absence of site-specific PGT construction plans for sensitive areas, especially stream crossings. /214

The OFI's only ANGTS stop work order was issued by the San Francisco Field Office, after consultation with Rhett, on March 24, 1981, on advice from the Wallula (Washington) Construction Office headed by Russell. /215 Two days earlier, Russell and Robert Wyatt, a UII contractor, discovered on a Saturday reconnaissance visit to the Juniper Canyon area that a PGT contractor, anxious to begin site preparation work, was hauling heavy escavation equipment down into the canyon, badly damaging a slope highly vunerable to erosion. The slope was on BLM land, but off the approved right-of-way. Russell immediately informed Bellarts of the transgression and on March 24, BLM and PGT were advised. After brief consultations, Bellarts, under Rhett's authority, issued the stop work order effective that same day.

The next day, PGT placed responsibility on an over-zealous subcontractor and its own failure to have a field inspector on the premises. OFI, satisfied with this explanation, lifted its order March 26. Construction began, PGT was denied a request for an expanded right-of-way in the canyon, and slope damage was restored as best as possible.

The San Francisco Field Office also issued two compliance orders, which are less severe and may serve as a preliminary step to a stop work order. /216 The first was levied April 27, 1981, also on Russell's advice, to stop the sponsors from withdrawing water from the Snake River in southeastern Washington without a permit from the U.S. Army Corps of Engineers. The second was written by OFI's Rosalia (Washington) Construction Office, again instigated by Russell, on June 30, 1981. PGT

contractors had failed to established proper sedimentation controls at various stream crossings. The sponsor's contractors, in both cases, complied promptly to OFI demands and work was not halted.

The West Leg's most distressing problem, however, was a high rate of reported weld rejections in the field. From June 8-11, 1981, an OFI Special Observation team, led by DOT AAO Lloyd W. Ulrich, was dispatched by Rhett to "gain facts concerning the high field girth weld reject rates ...." /217 The observation team found possible violations of the DOT pipeline safety regulations and misinterpretations in radiographic anaylsis (non-destructive evaluation). The OFI inquiry ended with a comprehensive study and report by Tolly, released on February 25, 1982. /218 Tolly concluded that:

> PGT's QC system was responsible for discovering the problem of radiographs being misinterpreted. Once the problem was identified, the action taken by the company (rereading the radiographs and removing the radiographic contractor's interpreter and reassigning the PGT NDT Inspector) was appropriate. The rereading and execution of repairs appear to have been competely implemented.

The West Leg prebuild pipeline was essentially completed on September 30, 1981, on schedule and, at $165 million, under budget. At an October 1 ceremony, the first Alberta gas purchased by Pacific Interstate Transmission Company, an ANGTS associate, entered into the system. Construction on the compressor and meter stations would continued into December, due to labor disputes and late delivery of equipment, but gas was directed around the stations to California.

About the same time, all work on the ANGTS affiliate project, the Western Delivery System prebuild, was being completed. The 351-mile northern section, known as the Pan Alberta Project and constructed by McMillian's Northwest Pipeline Company, had snaked its way through eastern Oregon and southern Idaho by July 21, 1981. Boyd's El Paso Natural Gas Company would finish the southern sections, called the San Juan System expansion project, through eastern Utah into northern New Mexico by October 1981. The western distribution component of ANGTS had, by November 1, 1981, become a reality.

OFI's West Leg oversight, though spared heartbreaks, suffered a few headaches. The San Francisco Field Office's biggest problems appeared to stem from late mobilization. As Russell explained, "we [OFI field inspection personnel] really had no opportunity [or time] to...review and assess the [PGT construction] program" - which complicated subsequent monitoring activity. /219 Additionally, although Rhett's oversight approach intentionally minimized field surveillance to avoid "over-regulating" a conventional project, the OFI field presence may have been too low. In an agency of over 100 people (in late 1980) created expressly to oversee ANGTS pipeline construction, Russell noted, only three persons were regularly engaged in actual field monitoring.

Given the slow start-up and low field staffing, some OFI officials believe the agency was fortunate to have avoided major problems. The discovery of slop damage in Juniper Canyon, by some accounts, was almost by chance; Russell's schedule did not always provide for such reconnaissance. As he noted:

> Had BLM discovered the violation instead of OFI, we [OFI] would have suffered a serious political embarrassment.... BLM believed that they could do the [oversight] job better. Thank goodness the [PGT] sponsors were conscientious and the construction was rather conventional. /220

Rhett tried to utilize existing land manager skill (BLM and the Forest Service) in West Leg surveillance while still preparing his own staff for Phase II Alaska Leg construction. Admittedly, the OFI West Leg team was small, somewhat inexperienced and lacked an opportunity to overcome these drawbacks by pre-construction study due to slow mobilization. Rhett, experimenting with various oversight arrangements, required a training ground for the more considerable Alaska Leg task, and, despite its limited applications, the lower 48 Prebuild was his only chance. Since West Leg oversight was, for the most part, simple and straightforward, Rhett felt he would not endanger regulatory integrity and would actually facilitate conventional construction by limiting OFI oversight and field enforcement. At the same time, the OFI was gaining some valuable experience in management oversight. With its Lower Leg efforts, the OFI was going to school for Alaska.

Financing

Alaska Leg financing, in 1980 and 1981, failed to materialize as project proponents had hoped. Prospects had flickered during 1980 and early 1981, flared momentarily during June 1981, but dimmed generally thereafter. Prospective investors, particularly the Prudhoe Bay producers who built TAPS, stood apart. The producers, barred from equity involvement by the President's Decision and perhaps suspicious of McMillian's tight management of Alaska Northwest, the Alaska Leg partnership, concentrated on foreign importation and on lower 48 well exploration and development. Bankers remained tentative as long as the producers balked. In the State of Alaska, Gov. Hammond recommended participation, but the legislature refused to act. NWA added new partners to increase its underwriting capabilities, but the consortium was still financially overmatched by the enormity of its undertaking. Arlon Tussing, the Alaskan economist, was proving to be something of a genuine, if perhaps dark, prophet.

There were a variety of contributing factors to ANGTS's sustained financing failure. The first, and perhaps most compelling, factor was the rather sudden glut in the U.S. gas market. President Carter's de-

regulation effort, culminating in revised pricing schemes and gas reclassifications in the Natural Gas Policy Act of 1978, stirred new exploration, redirected intrastate gas to interstate markets and, eventually, pressured Canadian and Mexican exporters to reduce prices. /221 Consequently, gas was more plentiful and readily available.

There was, in this new market climate, several disincentives for ANGTS investment. All three producers had alternative sources of energy to draw upon and market more profitably in the short run. Sohio, a "big three" North Slope producer, had invested heavily in the TAPS project and could afford a short investment hiatus before rushing into ANGTS alliance. Most of the Alaskan Northwest affiliates found domestic, Canadian and Mexican gas to transport and sell at lower prices than those forecast on Alaskan sources. Furthermore, local distributors, suddenly finding more gas from the shippers than they could use, were not anxious to pay a premium for Alaskan gas when less expensive conventional gas appeared so abundant. /222 All things considered, the natural gas market recommended an ANGTS freeze.

A second factor contributing to Alaska Leg financing woes was the regulatory limitations placed upon producer involvement in the ANGTA and the President's Decision. The producers, prohibited from equity ownership in ANGTS and blocked from a central, directive role in project management, had less incentive to finance or underwrite Alaskan construction. The oil companies were not accustomed to funding an enterprise over which they had so little control.

Third, the rapid, dramatic escalation in projected Alaska Leg costs must have discouraged investment. One suspects that early Alcan skeptics, such as El Paso chairman Howard Boyd and FPC administrative law judge Nahun Litt, were not surprised by the cost expansion, but others may have been. In 1975, the Alcan group projected a $7.344 billion ANGTS basic construction cost, a figure which compared very favorably with El Paso and Arctic Gas estimates at the time but one for which Litt, during the FPC hearings, could find little substantiation. (See FIGURE 3-11.) The original construction estimate would rise to about $10.040 billion given likely interest and inflation scenarios, and a construction schedule which called for project completion at the end of 1982. This cost rose yet higher to $13.2 billion after cost overrun and project delay assumptions, later incorporated in the President's Decision.

By 1980, however, the basic ANGTS construction cost had risen to $16.611 billion. After accounting for suspected interest charges, inflation and project schedules, the new total estimate reached nearly $30 billion - an increase of two and a half times the original Alcan projection in only five years. Nearly all the increase, however, was attributable to NWA's cost escalation on the Alaska Leg. As FIGURE 3-11 indicates, the Alaska Leg construction estimate grew from $2.385 billion in 1975 over four times to $10.566 billion in 1980. By comparison, cost

FIGURE 3-11: ANGTS Cost Escalation

1 ORIGINAL ALCAN ESTIMATE, 1975[1]

Alaska Leg	$ 2.385 billion in 1975 dollars
Canadian Leg	3.469
Northern Border	.970
West Leg	.520
	$ 7.344 billion

This basic figure had to be revised to include (1) interest during construction (AFUDC, Allowance for Funds Used During Construction); (2) five percent inflation rate; and account for project completion by 1/1/83:

$ 10.040 billion

The President's Decision assumed cost overruns (10 percent on Northern Border, 40 percent on Canadian Leg and 25 percent in Alaska) and an additional year delay in completion to 1/1/84:

$ 13.200 billion

1 This original estimate was filed with Alcan's application to the FPC on July 9, 1976, for Certificate of Public Convenience and Necessity.

2 REVISED PROJECT ESTIMATE, 1980[2]

Alaska Leg	$ 10.566 billion in 1980 dollars
Canadian Leg	3.989
Northern Border	1.314
West Leg	.742
	$ 16.611 billion

For comparative purposes, this figure represents $ 12.068 billion in 1975 dollars - $ 4.724 billion more, or 64 percent greater, than the original Alcan estimate of $ 7.344. Note the increase in Alaska Leg costs, from $ 2.385 billion in 1975 dollars to $ 10.566 billion in 1980 dollars. This represents an increase of 301 percent over the original estimate. By comparison, costs on the other three segments rose only marginally: Canadian Leg, 15 percent; Northern Border, 35 percent; and West Leg, 43 percent.

This basic 1980 figure had to be revised to include inflation rates of 10 percent declining to eight percent over the 1981-85 construction period, and interest during construction (AFUDC):

$ 29.985 billion

This represents more than a two-fold increase over the original Alcan estimate within a five year period. About 80 percent of this increase can be attributed to a projected rise in Alaska Leg costs.

---

2 The revised estimate was filed with Northwest Alaskan's application for final certification to the FERC on July 1, 1980.

increases on the other three segments were more modest: Canadian Leg, 15 percent; East Leg (Northern Border), 35 percent; and West Leg, 43 percent.

Fourth, the project might have benefited from a central, independent coordinator - perhaps similar in concept to Tussing's project leader - to encourage trust and cooperation among the various ANGTS players. He may have, particularly in the period immediately following the Decision, helped facilitated the hard compromises and essential alliances necessary to set financing in motion. After Energy Secretary James Schlesinger resigned, no one either in or out of government emerged who possessed sufficient stature or sustained interest to broker critical project decision-making. Rhett offered himself as arbitrator, but he believed that political facilitation would be fruitless without the supporting economics.

A fifth factor might be attributed to residual ill will between McMillian and former members of the Arctic Gas consortium, the project's first, largest and most influential contestant. Although several of the Arctic Gas group were enlisted for the Alcan sponsor group, led by NWA, many were "second class" partners not afforded full privileges of the eventual Alaska Northwest consortium. Furthermore, the Prudhoe Bay sponsors, once Arctic Gas members, would not join Alaska Northwest. This organizational separation precluded the kind of "inside" involvement the oil companies had enjoyed with TAPS and might prefer with ANGTS, especially if they were to provide equity or debt funding. They appeared reluctant to ally with NWA as long as McMillian had a tight management lock on the enterprise.

Finally, Alaskan and federal reluctance to avoid any financial commitment to the project probably undermined confidence in ANGTS among some potential financiers. After all, if the State of Alaska, perhaps the pipeline's largest overall beneficiary, was not willing to risk any of its own money, was it wise for an independent investor to become involved? Furthermore, if the Carter administration, which had selected the route and sponsor, and supervised the development of special oversight arrangements, flatly refused to help underwrite the effort, investment incentive had to be reduced. Given signs of a new surge in domestic gas availability, investors required a strong incentive or clear signal of ANGTS support from the government to divert their attention and energies from lower 48 activities.

Federal officials, perhaps, saw financing from a counter perspective. ANGTS, after all, was a private construction project. If private investors had so little faith in its prospects, why should the government underwrite it, particularly since recent increases in conventional gas sources appeared sufficient to abate the shortage? Such reasoning fostered a conceptual stalemate, with each party somewhat reluctant to step forward forcefully for fear that it might be assessed a disproportionate share of the risk or that the others might become "free riders." To some

extent, a perverse dynamic developed, one which tended to frustrate compromise and undermine concerted action.

Jack Rhett, the Federal Inspector, recognized these factors, but could do little about them. Indeed, he had no reason to become involved in finance negotiation, which was beyond his mandate. His job was simply to monitor ANGTS construction, not promote its basic concept or financial viability. His opinion, however, was solicited by Congress and he, like other knowledgeable observers, felt that the Decision's financing stipulations would not prevent financing - as long as the project remained viable from a gas marketing standpoint. On February 20, 1980, Rhett told this to the House Budget Committee. /223 He noted that the Department of Energy, now under the direction of Secretary Charles W. Duncan, Jr., had developed a position papers proposing a federally-guaranteed backup funding pool, to encourage sincere negotiations among the ANGTS principals. In a weak gas market situation, Rhett suggested, the pool might be imprudent; in a strong one, unnecessary. To his mind, financing would be decided by the market, regardless of Decision restrictions or governmental device.

On March 18, 1980, McMillian and Alaska Northwest representatives met with the three major North Slope producers, Alaska's Jay Hammond, and various U.S. government officials, including Rhett and Duncan, who served as chair. /224 The sponsors and producers agreed to develop, by mid-April, a written understanding for two-phased project cost sharing. The first phase would involve joint financing of ANGTS design, including design of the gas conditioning plant. The second phase, which was not discussed extensively, would establish an agreement for construction financing. Hammond, after the meeting, described the session as productive. He expressed the state's interest in finance participation, although he could not speak for the legislature. Another meeting was tentatively scheduled between the sponsors and producers for April 8, with the entire group planning to meet again on April 15 to review the draft agreement on design financing.

After the producers and sponsors met in mid-April, the two groups convened again in Washington on April 25, 1980, under Duncan's auspices for a joint negotiating session chaired by Deputy Energy Secretary John Sawhill. /225 After the meeting, a brief statement was issued:

> ...[A]n agreement in principle has been reached between the sponsors of the Alaskan Natural Gas Transportation System, the North Slope producers and the state of Alaska on a joint operating agreement for design, engineering and cost estimation of the Alaskan segment of the pipeline and the gas conditioning plant.
>
> At a meeting with DOE officials in Washington, the sponsors and producers said they would report to the Department in about three weeks on their efforts to identify outstanding issues relating to financing construction and operation of the project. /226

On May 15, the sponsors, producers, and state of Alaska officials met yet again with Duncan and Rhett in Washington to discuss details, but the agreement for design and engineering cost sharing was not released. /227

Finally, on June 19 in Duncan's Washington office, the three principal North Slope gas producers and Alaska Northwest sponsors signed agreements for both phases of project financing scheme. The endorsements, at the time, appeared to brighten construction prospects considerably. /228 The first agreement, about 200 pages long, specified in detailed, legal terms a financing and management plan for Alaskan Leg design, engineering and construction planning. It was also signed by Terry Miller, Alaska's lieutenant governor. The second document, only a single page in length and titled "Joint Statement of Intention," established a willingness to cooperate in joint Alaska Leg financing. It stated:

> It is the mutual objective of the Producers and Alaskan Northwest [NWA] that the ANGTS be completed and placed in service at the earliest practicable date and [accordingly]...intend to use their best efforts, on a joint and cooperative basis, to expedite design, engineering and cost estimation.... The Producers...will work with Alaskan Northwest in an effort to develop its financing plan in such time and manner so that necessary governmental approvals may be obtained and construction commenced and completed as scheduled.... /229

Although the first agreement did enable serious design work to continue, the "Joint Statement" was not the breakthrough which project proponents had been awaiting. It began to appear that only the Prudhoe Bay oil companies, Exxon in particular, or the federal government could provide or underwrite the funding levels necessary for ANGTS construction. The producers, witnessing an expansion in the domestic gas market, limited in project control by the law and perhaps a bit uncomfortable with McMillian's control over management of Alaska Northwest, refused to make a determining commitment. The federal government, as noted above, had lost impetus for dramatic intervention. Carter and the Congress hoped to facilitate the ANGTS, but neither would carry it financially, particularly in light of rejuvenated gas supply and NWA's inability to deliver on earlier promises.

McMillian, at least officially, had not abandoned his original Alcan plan of enticing bank financing, based upon the combined assets of the Alaska Northwest partnership. In this manner, the consortium, led by McMillian and NWA, would not have to concede control over the ANGTS to the North Slope producers. In early September 1980, Alaska Northwest added four new and influential members into the fold as limited partners:

- Columbia Gas System, Wilmington.
- TransCanada Pipelines, Toronto.

° Texas Gas Transmission, Owensboro.
° Tetco Four, Inc. (Texas Eastern Transmission and Transwestern Pipeline), Houston. /230

This expansion brought the sponsorship roster to 11 firms. (See FIGURE 3-12.) Additionally, Phillips Petroleum Company volunteered to share ANGTS design financing costs with the three Prudhoe Bay gas producers. /231

While these negotiations on Alaska Leg construction financing dragged on, West Leg and East Leg financing, by comparison, came rather swiftly. This is due, in some large part, to the lower construction costs of the two lower 48 legs and the assured market for competitively-priced Canadian gas in California and in the American Midwest. In any event, the West Leg prebuild, which involved only about 160 miles of pipeline "looping" in Idaho, Washington and northern Oregon, was estimated to cost about $168 million. On December 22, 1980, nine U.S. commercial banks, led by Bankers Trust Company, agreed to loan PGT up to $160 milion, while the company declared an intention to raise any additional money through the sale of common stock. /232 In the end, the West Leg would be built for about $165 million.

On December 10, 1980, the East Leg sponsor group, Northern Border Pipeline Company, signed an agreement for a $1.055 billion loan from a consortium of 28 North American banks, led by the Canadian Imperial Bank of Commerce (CIBC), to finance most of the East Leg construction. /233 "The financing is the largest private sector package assembled for a North American pipeline project of this kind," observed CIBC vice chairman Charles M. Ladley at the signing. CIBC assumed 14 percent of the project financing, with other member banks sharing the difference. The financing consortium included many of America's largest banks, including The Bank of America, Chase-Manhattan, Citibank, Morgan Guaranty Trust Company and, in Canada, the Royal Bank of Canada. The syndicated loans of the financing consortium covered about 70 percent of the anticipated $1.3 billion construction cost and had a 10-year maturity period.

Some project optimists had hoped that successful East Leg and West Leg funding would encourage Alaska Leg financing, but given the two-stage construction scheme, this was not necessarily so. When Carter and Trudeau approved the prebuild idea, they may have actually undermined the project's unitary integrity and, from the viewpoint of a potential Alaska Leg investor, jeopardized its immediate chances as a whole. Prebuild Alberta gas - cheap, plentiful, increasingly available - would render Arctic gas less necessary and less marketable in the foreseeable future, thus discouraging Alaska Leg construction at that time. In short, the prebuild agreement may have trimmed the Phase I coattail upon which Phase II could have ridden and its success, by this analysis, could have undercut immediate prospects for total ANGTS completion.

FIGURE 3-12:

ALASKA NORTHWEST NATURAL GAS TRANSPORTATION COMPANY
(Partnership originally formed in March 1978)

2/28/85

Producers[1]

Atlantic Richfield Company (ARCO)
Exxon Company, USA
Standard Oil Company of Ohio (Sohio)

Transmission Companies

	Partner	Parent
*	Northwest Alaskan Pipeline Company[2]	Northwest Energy Company
	Northern Arctic Gas Company[3]	Northern Natural Gas Company (InterNorth, Inc.)
	Pacific Interstate Transmission Company (Arctic)[4]	Pacific Interstate Transmission Company (Pacific Lighting Corporation)
	Pan Alaskan Gas Company[5]	Panhandle Eastern Pipe Line Company
*	United Alaska Fuels Corporation	United Gas Pipe Line Company
*	Calaska Energy Company	Pacific Gas & Electric Company (PG&E)
	American Natural Alaskan Company[6]	American Natural Resources Company
*	Tetco Four, Inc.[7]	Texas Eastern Transmission Corporation TransWestern Pipeline Company
	Columbia Alaskan Gas Transmission Corporation[8]	Columbia Gas System, Inc.
*	TransCanada Pipelines Alaska, Ltd.[7]	TransCanada PipeLines USA, Ltd.
	Texas Gas Alaska Corporation[9]	Texas Gas Tansmission Corporation

---

1 Producers associated by agreement, not official members
2 Consortium's sponsoring partner
3 Withdrew in May 1984
4 Withdrew in February 1985
5 Withdrew in December 1984
6 Withdrew in April 1982
7 Joined in September 1980
8 Joined in September 1980, but withdrew in December 1984
9 Joined in September 1980, but withdrew in June 1981

* Current partner

The prebuild strategy, nevertheless, did tend to satisfy many of the immediate objectives of the project principals. Blair, for instance, secured a new express route for excess AGTL gas. Trudeau was able to accommodate western Canadian energy producers and shippers without seriously aggravating nationalist sentiments. In the United States, the Congress increased the supply of competitively-priced gas, through increased Canadian imports, without risking a federal dollar. Even McMillian, through West Leg construction, gained an new transmission line for serving Western distributors with Canadian gas.

Since January 1981, in Washington and New York City, the producers, sponsors and bankers continued to deliberate over an Alaska Leg financing plan. /234 Finally, on May 21, 1981, a "conceptual approach" for financing was agreed upon by the ANGTS sponsor consortium and the Prudhoe Bay Producers for Alaska Leg financing. /235 The deal, summarized below, was outlined in letters from McMillian to the Prudhoe Bay Producers and to James Edwards, President Reagan's energy secretary. The approach indicated:

- For ANGTS financing purposes, the "as spent" cost of the Alaskan pipeline will be $21 billion and the plant, $6 billion. An additional completion assurance pool of $3 billion would be formed.
- The debt/equity ratio for all capital investment would be 75:25.
- Investment limits for all participating companies would be defined from the outset. The transmission companies (sponsors) would provide equity up to $5.25 billion while the producer companies would offer equity up to $2.25 billion and debt up to $6.75 billion.
- The Alaska Northwest partners would own 70 percent of the pipeline and conditioning plant while the producing companies would own the remaining 30 percent. Equity commitments to the completion assurance pool would be on the same 70:30 ratio.
- Debt funds would be sought on a project credit basis. The sponsors would be responsible for arranging $15.75 billion in debt financing, while the producers would assume an additional $6.75 billion, as stipulated above. /236

The agreement was approved subject to several qualifications:

(1) The conditioning plant must be considered part of the Alaskan Leg, subject to rate base inclusion;
(2) "Each company's investment will be limited to a sum certain defined in the financing package;"
(3) All participants, both equity and debt, will issue firm commitments, acceptable to other members and previous to Alaskan Leg construction;
(4) All governmental approvals must be issued and approved by the parties;
(5) "All parties must be assured that the project is economically viable;
(6) Completion of the Canadian section must assured;

(7) "Each financing layer will be afforded equal terms and conditions." /237

The plan was developed and approved although certain provisions, such as the prohibition of producer equity and rate base inclusion of the conditioning plant, were in direct violation of the President's Decision. NWA, its fellow Alaska Northwest associates and the Prudhoe Bay oil firms knew that they would have to appeal to the President and Congress for legal amendment for the financing plan to attract serious attention. McMillian had opened dialogue with White House energy staff and congressional energy leaders on prospective changes. In the final days of May, he took the agreement and, with the legal restrictions of the ANGTA and the President's Decision in mind, drafted a series of waivers required to facilitate the new financing plan. /238

The Waiver Package

McMillian's initial waiver requests may be summarized by four general propositions:

- Billing commencement, to allow sponsors to receive a return on investment, before "completion and commissioning" of the entire ANGTS.
- Producer participation, to enhance the project's financibility.
- Regulatory consistency, to ensure "that, once made, regulatory decisions on which the project's lenders have relied will not subsequently be rescinded or modified to their detriment."
- Shipper tracking and pricing, to ensure investors that shippers will be able to recover all charges from their customers. /239

In total, the provisions represented a dramatic break from the conditions of Alcan's initial award by the President's Decision and an unprecendented package of investment inducements, shifting some of the risk from the financiers to the gas consumers.

On June 1 and 2, 1981, McMillian discussed his initial waivers with investment officers of four major American banks and several large American insurance companies. /240 It was the first opportunity after the producer-sponsor agreement for the investment community to study the project's financial needs and assess its technical merits. On June 3, the officers, from Bank of America, Chase Manhattan, Citibank and Morgan Guaranty Trust, endorsed the waivers generally in a joint statement of "preliminary views" to McMillian, but asked for additional time to compile a financing structure for the project.

McMillian, of course, understood that financing was impossible without the waivers. On June 17, 1981, he wrote President Ronald Reagan, in accordance with the ANGTA, to request "your consideration of certain waivers of law...which must be addressed if we are to move forward with private sector financing [for the ANGTS]." /241

> These waivers, or variations [thereof]..., will, if submitted by you to Congress, clearly demonstrate that, as you stated to the Canadian Parliament on the occasion of your recent visit, "... We strongly favor prompt completion of this project based on private financing." We firmly believe that the waivers outlined are consistent with many of the stated objectives of your Administration, and will serve to:
>
> - Strengthen energy ties with Canada.
> - Reduce U.S. dependence on imported oil.
> - Lessen the balance of payments deficit by billions of dollars annually.
> - Provide productive stimulation of the U.S. economy.
> - Advance regulatory reform.

- Permit private enterprise to complete the single most important energy project now underway in the United States and Canada. /242

McMillian claimed that "without waivers which speak adequately to the concerns of lenders and participants..., we cannot assure you that private financing wil be forthcoming to complete" the ANGTS. "If appropriate waivers are proposed by you and authorized by Congress this year, we are optimistic that our plans for private financing will be realized and that the project will remain on schedule." /243

McMillian concluded:

> We are fully prepared to demonstrate that the U.S. decision to proceed with Canada on this joint international project remains clearly in the national interest; that there is every economic, as well as diplomatic, reason to honor our treaty and agreement with Canada; and indeed that the Alaskan project represents America's best energy bargain. /244

McMillian's initial waiver requests, essentially the four general principles described above and reproduced exactly in FIGURE 3-13, were the object of a new round of discussions among White House officials, departmental leaders and Congressional Hill staff.

On the Hill, several key legislators were already familiar with NWA's objectives. In the Senate, the two Alaskan Republicans, Stevens and Frank H. Murkowski, supported the waivers in principle. They had maintained that original stipulations, in the President's Decision, were unrealistic in limiting producer equity involvement and in excluding the conditioning plant from the rate base, given the project's unprecedented costs. They quickly allied James A. McClure (R-Idaho), chairman of the Senate Committee on Energy and Natural Resources, and Henry Jackson, the ranking Democrat, energy expert and ANGTS sympathizer. The Alaskans, through Jackson, were determined to further strengthen their nonpartisan ANGTS coalition in the Senate. Given Stevens' influence as majority whip, the chamber's historic support of the ANGTS initiative, the technical nature of the issue and generalized benefits, Stevens and Murkowski had every reason to expect membership support of waivers.

In the House, prospects appeared almost as bright. Waivers were endorsed by Jim Wright (D-Texas), the chamber's majority leader. McMillian's history as a Democratic Party supporter, his long involvement in Texas Democratic politics and his personal friendship with national party chairman Bob Strauss assured him of an opportunity to make NWA's case. Wright was joined across the aisle by Don Young (R-Alaska), the Alaskan congressman; Manuel Lujan Jr. (R-NM), ranking minority member of the House Committee on Interior and Insular Affairs; and Don H. Clausen (R-Calif), the committee's second Republican in seniority.

FIGURE 3-13: McMillian's Original Waiver Request
Letter to President Ronald Reagan
June 17, 1981, Attachment

1 Billing Commencement

The Alaska system transportation tariff approved by FERC provides that billing from gas consumers cannot start until the entire ANGTS is completed and commissioned as being capable of delivering gas even though gas deliveries may not have actually commenced. The transportation tariff approved by the Canadian National Energy Board (NEB) provides that the full cost of service may be billed when the Canadian segment of the system is completed and commissioned even though gas deliveries may not have commenced.

Canadian companies, financial advisors and government officials indicate that the billing commencement authorized by the NEB is absolutely essential to finance the Canadian facilities.

U.S. companies and banks state that the Alaska facilities cannot be privately financed unless a minimum bill covering debt service and out-of-pocket costs (similar to the minimum bill now provided when the whole ANGTS is completed) can be billed when the Alaska facilities are completed and commissioned. In addition, until the financing plan is completed, the opportunity should be retained to divide the Alaska facilities for billing commencement purposes into limited and logically defined sections consistent with sound construction practices.

The detailed billing commencement procedures must be submitted to FERC for approval.

2 Producer Equity

Private financing requires some producer investment in debt and equity in the Alaska facilities. In order to assure that producers will not control the partnership which owns the Alaska facilities, the producer equity interest will be less than 50 percent, initially and throughout the life of the project. The producers will not be allowed to limit access to the tranportation system, nor restrict its expansion.

3 Conditioning Plant

The conditioning plant should be an integral part of the ANGTS, however, the incentive rate of return mechanism now required for most of the pipeline is neither necessary nor desirable for the plant and if applied would result in substantial delay of the project.

4 Regulatory Consistency

The final non-appealable orders issued by FERC covering all remaining regulatory actions necessary to commence construction must be effective when accepted with no further action required and must not be altered during the life of the project in any manner that would impair service of debt.

5 Regulatory Reform to Achieve Expedition

Regulatory procedures should be structured to provide an adequate record to satisfy all parties at interest but should be streamlined to assure that all required approvals are final and non-appealable by February 1, 1982.

6 Rolled-in Pricing

U.S. shippers and lenders must have assurance that those shippers who contract for the purchase of Alaska gas and for transportation service in the U.S. and Canada will be allowed to roll-in or average Alaska gas costs with other gas acquisitions costs.

It was in House committee, most agreed, that the fate of the waivers would rest. The House Committee on Interior and Insular Affairs, led by Morris K. Udall (D-Ariz), would share jurisdiction over the waivers with the House Committee on Energy and Commerce, chaired by John D. Dingell (D-Mich). Dingell and Philip R. Sharp (D-Ind), chairman of the Subcommittee on Fossil and Synthetic Fuels, assumed the Congressional lead on the issue. This development could not have been much comfort to McMillian. First, Dingell, Sharp and their Energy and Commerce committee colleagues, largely representatives of energy-consuming states and disposed toward energy regulation, were less development-oriented on energy matters than their counterparts on Udall's committee, composed of many westerners from producing states. Furthermore, Dingell appeared to blame the Canadian steel pipe coup at least in part on Northwest's inability to moderate Foothills, their Canadian partners. The Arctic Gas consortium, particularly the oil company members, would not have allowed such a maneuver, some project analysts believed.

McMillian, on the other hand, had reason for optimism. ANGTS, before the waivers, had been an issue that tended to bridge ideologies and Congressional parties. Members, with very little effort, could find and meld a variety of sound arguments for supporting the project - national security and energy self-sufficiency, gas reserve supplementation, enhanced Canadian-American relations, Alaskan economic development, improved balance of payments, reduced regulation of private enterprise, OFI's experiment in public administration. In addition, the waivers were being posed as technical enhancements, not major policy chnages, for freeing the ANGTS from needless, neddlesome regulatory excesses.

Members appear inclined, on a rather narrow, noncontroversial issue such as the waivers first seemed, to follow the lead of the controlling committee (Energy and Commerce in the House) or satisfy the preference of those colleagues who seemed disproportionately affected, in this case the Alaskans. The Congress, after all, had other, more pressing business at hand. If the President, the bipartisan leadership of both houses and the Alaskans could agree on a package to save a project granted unanimous congressional support and if waivers required no expenditure of federal funds, few members were disposed to examine the technical language precisely. They would invest their time instead in more controversial matters or on issues relevant closer to home. The ANGTS waivers, at the outset, were a "low profile" item. Many members, quite understandably, would probably only read the committee report and vote according to its recommendation.

Throughout June and early July, Dingell's House committee staff analyzed the implications of the waivers while the bank officers studied an ANGTS financing plan predicated upon their passage. Stevens, anxious for passage, awaited a signal from Dingell of House acceptance before asking President Reagan to forward the waiver package officially. It was not forthcoming. On July 22, 1981, Stevens' hope of immediate con-

sideration was thwarted. Dingell, Sharp, Udall, Lujan and other leading members of the two House committees informed Stevens of "significant progress" in their consideration of the waivers, but acknowledged that "significant and troublesome" issues remained. /245

> The current waiver proposal [submitted by McMillian to Reagan on June 17, 1981]...fundamentally alters the original nature of the project. Particularly by the proposal that advance billing be permitted for completed sections of the pipeline, but also by the regulatory certainty waivers and others, the agreement which we reached with the sponsors [NWA] of this project on behalf of American gas consumers would be importantly modified. Signficant portions of the risk of non-completion of the project and significant financing costs would be shifted onto those gas consumers. In addition, the ability of their regulators to protect their interests would be simultaneously reduced. /246

Obviously, the Dingell and Udall House committees, unlike McClure's committee in the Senate, was not prepared to act immediately. "We believe," the letter continued, "that the surest way to doom the waiver proposals...would be for us to encourage them to be sent forward by the President before the Congress at large has had the opportunity to weigh the difficult questions of whether the value to the nation of this project still makes the cost it now involves worth paying." /247

Stevens, however, wished not break stride. In consultation with NWA officials, he developed a revised waiver package, which somewhat reduced the scope of McMillian's original request. On July 22, two days after receiving the Dingell/Sharp letter, Stevens presented the revised waivers to President Reagan in a letter countersigned by Murkowski, Jackson and McClure. /248

"Our review of the original waiver package submitted to you [Reagan] has convinced us that it included several waivers that are much broader than necessary," Stevens wrote. /249 As as alternative, Stevens recommended the revised waivers, which were developed "through extensive investigation by staff and direct contact with involved representatives of the financial community, the North Slope gas producers, and the pipeline sponsors." The new language, he concluded, "removes the existing legal impediments to financing this project without unduly burdening the American consumer or eviscerating needed legislative and regulatory safeguards."

Stevens acknowledged House reluctance to push ahead immediately:

> We have met with several of our colleagues in the House of Representatives who serve as Chairmen and Ranking Minority Members on the authorizing Committees with jurisdiction over the project. We have discussed the project in detail. We recognize that they are not yet prepared to support the waiver package in its entire-

ty. But they have assured us that any waiver package submitted [now] would certainly be taken up in good faith. /250

"In order to provide adequate time for Congress to address the waiver package [without delaying the project schedule]," Stevens concluded, "we urge your prompt consideration of the revised proposal." /251

Reagan chose, at that time, not submit the waivers. His hesitance may be explained, perhaps, by a reticence to promote a Carter Administration project of which he knew very little. The President, so early in his administration, was likely preoccupied with his own initiatives and building support for many of his own proposals to extend himself carelessly on behalf of the ANGTS. He was willing to help Stevens and Murkowski, but not at the risk of alienating House Democratic leaders, who requested more time for study. If Reagan waited until the waiver package was "ripe," he might accummulate a bit of "goodwill" in the House which could be used to further his own programs.

Stevens' revised waivers, in any case, do not appear significantly different from McMillian's original waiver request, although they are more precisely defined and limited. Both versions permit producer ownership participation and added the conditioning plant to the rate base. Both versions allow prebilling, or rate base equity and debt recovery before gas delivery. Whereas McMillian requested Alaska Leg segmentation to allow immediate billing upon completion of discrete sections, the revised waivers prohibited leg segmentation and established a "date certain," which set "the most likely date for the approved transportation system to begin operation" and prohibited prebilling before that time. /252 Both versions limited FERC authority to alter previous rulings on the project that might "impair the recovery of the actual operation and maintenance expenses, actual current taxes and amounts necesary to service debt, including interest and scheduled retirement of debt." McMillian's desire for "nonappealable" approvals was softened by Stevens language, which reduced amendment opportunities but did not preclude them.

Throughout August 1981, as OFI attended East and West Leg surveillance and continued its administration of NWA's preconstruction permits and approvals, congressional staff and ANGTS industry officials considered and assessed waiver options.

On September 14, Stevens' Senate group once again wrote the President "to request that you [reconsider and] present to Congress the waiver package we delivered with our letter of July 24." /253

After through deliberation, we stand convinced that this package provides enough economic certainty to allow a reasonable opportunity for project sponsors to obtain private financing while preser-

ving fundamental protections afforded natural gas consumers under existing law. This is not to say that the bankers or project sponsors are entirely content with these waivers; they expressly are not.... However, it is our opinion that this package comports with traditional principles of private financing and affords minimum changes in existing law necesary to allow for successful capitalization of the project. /254

"We have reached a critical stage concerning the timing of Congressional consideration of this waiver package," Stevens continued.

After meeting extensively with several of our colleagues in the House of Representatives, we realize that a negotiated solution among House and Senate principals is not possible given the imperative need for prompt consideration of this issue. The [ANGTA] imposes statutory time constraints upon the waiver process. We are in danger of expending the time needed for deliberation of the waivers on the decision of what package to propose. /255

Before closing, Stevens made two additional points. First, he claimed that failure to act quickly and decisively on the waivers would "result in a pervasive lack of confidence by industry in the resolve of our government to support needed transportation systems from arctic and frontier areas." Second, "any perceived unwillingness by our Government to take reasonable steps to promote this project will certainly be interpreted as a breach of faith if not a breach of international agreement" by the Canadians.

To sum up, it is our collective view that failure to address the waiver package which removes the remaining regulatory impediments to providing private financing of the project would be inexplicable to our constituents, the financial community, and our Canadian allies. We strongly endorse the enclosed waiver package and encourage you to present it to Congress at your earliest possible convenience. /256

The September 14 waiver request, as Stevens advised the President, was essentially identical to the June 24 revised waivers, although the articles are restated in the form of arguments rather than as general statements of fact.

Reagan, at this point, apparently began to consider submission more seriously. On September 22, Presidential Counsellor Edwin Meese III hosted McMillian at the White House, where the ANGTS and the proposed waivers were discussed. /257 McMillian's entry was secured by Peter Hannaford, an influential Washington public relations operative who had been associated with Michael K. Deaver, Deputy Chief of Staff and Assistant to the President, and engaged by McMillian for a $2,500-3,000 monthly fee.

Additionally, McMillian and Alaskan Northwest mobilized what one journalist described as a textbook lobbying effort. NWA's generous contributions to Democratic Congressional activities, over $50,000 to various party committees and programs during 1980-81, could not have been lost upon Democratic congressional leaders. /258

NWA's campaign was quite extensive. The company enlisted former Vice President Walter Mondale, through fees and a contribution to his political action committee (Future of America), to discuss the project with former Senate and House colleagues. /259 Mondale, of course, had been President Jimmy Carter's supervisor of the project, the man who enlisted Jack Rhett as Federal Inspector and the administration official to whom Rhett reported. Finally, McMillian hired the law firm of Robert Strauss, a former Democratic National Committee chairman, and the public relations company of Charles Mannatt, the party's national chairman at the time. /260

House Republicans were approached, as well. Hannaford's firm won access on the Hill as well as in the White House. Reagan's increasing interest drew upon party loyality and tended to reinforce original arguments for rescuing ANGTS, which included reduced regulation of private enterprise and gas market supplementation. After all, many House Republicans represented Midwestern districts which would be served by the Northern Border (East Leg) segment of the ANGTS. Finally, congressmen were contacted by the individual gas pipeline and distribution companies affected by the project. "I don't know a single Republican Congressman who wasn't approached on this issue," one congressional aide observed. /261

On September 23, nine days after the Stevens' letter and only a day after the Meese-McMillian meeting at the White House, Reagan received a second letter from Dingell. This one, cosigned by Udall and Sharp, now advised Reagan to submit the waiver package, as Stevens had defined it in his last (September 14), to the Congress for immediate action. /262

That same day, September 23, 1981, Reagan received a second letter on the ANGTA waivers from James T. Broyhill (R-NC), Ranking Minority Member of Dingell's House Committee on Energy and Commerce, and Clarence J. Brown (R-Ohio), ranking Republican on Sharp's Subcommittee on Fossil and Synthetic Fuels, to which the waivers likely would be assigned. /263 "...[W]e are concerned," they wrote, "that the [ANGTS] project will not be 'privately financed' if the waiver requests proposed by the sponsors [and provided by Stevens] are recommended by you and accepted by the Congress.

> Rather than securing the financing for the project's construction base on its value as the sole transporter of the Nation's single largest natural gas find, the sponsors are requesting a waiver of existing law to allow the "pre-billing" to consumers in the lower

> 48 states prior to the project's completion and, in fact, whether or not, the project is ever completed. This proposed waiver would transfer the risk of noncompletion of the project...to consumers [and] removes, in our judgment, the necessary element for the project to be fairly termed as having "private" financing. /264

Broyhill and Brown, in their letter, stated a willingness to allow any provision which enabled sponsors to recover costs incurred by federal regulatory delays. "We are unalterably and unequivocally opposed, however, to any waiver requests which would operate to transfer the risk of noncompletion to the consumer," they added.

> Under the general guidance of Secretary [of the Interior James G.] Watt, we have met several times with our colleagues in the House and in the Senate on this matter. We only wish we could report to you that we have reached a common understanding and a common position. Despite good faith efforts, we have been unable to do so. /265

The double impact of this September 23 House correspondence on the President must have been profound. On one hand, he had three leading House Democrats, all of rather liberal persuasion, urging his submission of Stevens' waiver package. On the other, he had two respected senior Republicans, boasting conservative credentials much like his own, who refused to countenance the package on "free market" and consumer protection grounds.

Reagan did pause. His own ideological predilections must have argued strongly in favor of the Broyhill/Brown position: If NWA could not attract financing under traditional circumstances, then ANGTS was not financially viable and therefore unworthy of unusual measures or Presidential promotion to save it. However, the waivers, through Stevens and Jackson in the Senate and McMillian's lobbying effort in the House, had gathered substantial bipartisan support. When Jim Wright and Ted Stevens agreed on an issue, its chance of Congressional approval was rather high. The Congressional leadership, clearly, wanted waivers to consider and, by the ANGTA, only the President could provide them. On October 15, 1981, the President submitted Stevens' waivers to the Congress. /266

> This waiver of law, submitted to the Congress under Section 8(g) of the Alaska Natural Gas Transportation Act, is designed to clear away governmental obstacles to proceeding with private financing of this important project. It is critical to the energy security of this country that the Federal Government not obstruct development of energy resources on the North Slope of Alaska. For this reason, it is important that the Congress begin expeditiously to consider and adopt a waiver of those laws that impede private financing of the project.

The final Findings and Proposed Waiver of Law, along with a Synopsis of Waiver, was attached to the President's message. (See FIGURE 3-14.)

Reagan, from what may be determined, was not particularly interested in the ANGTS. While he was willing to submit the waivers, he was apparently reluctant to spend his own political capital on ANGTS much like the banking community was reluctant to risk its investment capital under original ANGTA and Decision provisions. He would not actively promote the package, but instead allow Congress to decide the issue.

The waiver package was introduced in the Congress by McClure on October 19, 1981, as S.J. Res. 115, and after testimonials from the Idaho Republican, Jackson and the two Alaskan senators, was committed to the Senate Committee on Energy and Natural Resources. /267 The same day, the package was announced on the House floor as H.J. Res. 341 and referred jointly to the Committee on Energy and Commerce, where it was directed to Sharp's subcommittee, and the Committee on Interior and Insular Affairs.

Congressional hearings were scheduled almost immediately. In the Senate, McClure's Committee on Energy and Natural Resources held three sessions on October 22, 23 and 26, which were primarily informational but became highly advocatory in nature. /268 Jackson, Murkowski and Stevens each emphasized the importance of the waivers, if for somewhat different reasons. /269 Jackson, after emphasizing ANGTS importance to national security, explained "[e]ither we pass this waiver package...or we abandon our hope to develop our natural gas energy resources in Alaska [and] in northern Canada. The choice is that simple," he concluded. Murkowski underscored the project's potential to stem the "continued decline in...proven natural gas reserves," recalled environmentalist preferences for the Alaska Highway route and acknowledged the creation of some 13,000 to 16,000 jobs in his own state. Stevens, in a written statement, underscored the Congressional record of unanimous, bipartisan support for the project and the dire consequences for Northern energy development if the federal government failed to recognize and accommodate the special needs of a unique enterprise.

After the senators concluded their remarks, the hearings hosted a parade of administration, industry, gas association and investment banking witnesses, most roundly extolling ANGTS virtues and predicting, as did Energy Secretary James B. Edwards, that "the project [clearly] cannot be privately financed without this waiver proposal." /270 William P. Horn, deputy under secretary of the Interior, and Acting Assistant Secretary of State Ernest B. Johnson, Jr., both urged immediate consideration and passage. FERC Chairman C.M. Butler III was less enthusiastic, given anti-trust concerns over producer equity ownership, but supportive nonetheless. /271

Rhett, accounting the project's development and changes in the gas market structure, described the waivers as the "next step" toward project realization. /272

FIGURE 3-14: President's Message
Findings and Proposed Waiver of Law

To the Congress of the United States:

The Alaska Highway Pipeline route for the Alaska Natural Gas Transportation System was chosen by President Carter and approved by Congress in 1977. There was a strong Congressional endorsement that the pipeline should be built if it could be privately financed. That has been my consistent position since becoming President, as communicated on numerous occasions to our good neighbors in Canada and I am now submitting my formal findings and proposed waiver of law.

As I stated in my message to Prime Minister Trudeau informing him of my decision to submit this waiver:

> My Administration supports the completion of this project through private financing, and it is our hope that this action will clear the way to moving ahead with it. I believe that this project is important not only in terms of its contribution to the energy security of North America. It is also a symbol of U.S.-Canadian ability to work together cooperatively in the energy area for the benefit of both countries and peoples. This same spirit can be very important in resolving the other problems we face in the energy area.

This waiver of law, submitted to the Congress under Section 8(g) of the Alaska Natural Gas Transportation Act, is designed to clear away governmental obstacles to proceeding with private financing of this important project. It is critical to the energy security of this country that the Federal Government not obstruct development of energy resources on the North Slope of Alaska. For this reason, it is important that the Congress begin expeditiously to consider and adopt a waiver of those laws that impede private financing of the project.

RONALD REAGAN.

THE WHITE HOUSE, *October 15, 1981.*

Findings and Proposed Waiver of Law

Pursuant to the provisions of the Alaska Natural Gas Transportation Act of 1976 (ANGTA) 15 U.S.C. §719, *et seq.*, a transportation system to transport Alaska natural gas to consumers in the continental United States was selected and approved by Congress in 1977.

I find that certain provisions of law applicable to the federal actions to be taken under Subsections (a) and (c) of Section 9 of ANGTA require waiver in order to permit expeditious construction and initial operation of the approved transportation system. Accordingly, under the provisions of Section 8(g)(1) of ANGTA, I hereby propose to both Houses of Congress a waiver of the following provisions of law, such waiver to become effective upon approval of a joint resolution under the procedures set forth in Section 8(g)(2), 8(g)(3), and 8(g)(4) of ANGTA.

Waive Public Law 95–158 [1] [Joint Resolution of approval,[2] pursuant to Section 8(a) of ANGTA, incorporating the President's *Decision*] in the following particulars:

Section 1, Paragraph 3, and Section 5, Conditions IV–4 and V–1, of the President's *Decision*, in order to permit producers of Alaska natural gas to participate in the ownership of the Alaska pipeline segment and the gas conditioning plant segment of the approved transportation system; *provided*, however, that any agreement on producer participation may be approved by the Federal Energy Regulatory Commission only after consideration of advice from the Attorney General and upon a finding by the Federal Energy Regulatory Commission that the agreement will not (a) create or maintain a situation inconsistent with the antitrust laws, or (b) in and of itself create restrictions on access to the Alaska segment of the approved transportation system for nonowner shippers or restrictions on capacity expansion; and

Section 2, Paragraph 3, First Sentence, of the President's *Decision*, to include the gas conditioning plant in the approved transportation system and in the final certificate to be issued for the system; and the application of Section 5, Condition IV–2 of the President's *Decision* to the gas conditioning plant; and

Section 5, Condition IV–3, of the President's *Decision; provided*, however, that such waiver shall not authorize the Federal Energy Regulatory Commission to approve tariffs except as provided herein. The Federal Energy Regulatory Commission may approve a tariff that will permit billing to commence and collection of rates and charges to begin and that will authorize

[1] See: Executive Office of the President, Energy Policy and Planning, *Decision and Report to Congress on the Alaska Natural Gas Transportation System* (September 1977) (hereinafter referred to as President's *Decision*); and see H.J. Res. 621, Pub. L. No. 95–158 (1977), wherein the President's *Decision* was incorporated and ratified by Congress pursuant to Section 8(a) of ANGTA.

[2] 15 U.S.C. § 719f nt.

recovery of all costs paid by purchasers of Alaska natural gas for transportation through the system pursuant to such tariffs prior to the flow of Alaska natural gas through the approved transportation system—

(a) to permit recovery of the full cost of service for the pipeline in Canada to commence—

(1) upon completion and testing, so that it is proved capable of operation; and

(2) not before a date certain, as determined (in consultation with the Federal Inspector) by the Federal Energy Regulatory Commission in issuing a final certificate for the approved transportation system, to be the most likely date for the approved transportation system to begin operation; and

(b) to permit recovery of the actual operation and maintenance expenses, actual current taxes and amounts necessary to service debt, including interest and scheduled retirement of debt, to commence—

(1) for the Alaska pipeline segment—

(A) upon completion and testing of the Alaska pipeline segment so that it is proved capable of operation; and

(B) not before a date certain, as determined (in consultation with the Federal Inspector) by the Federal Energy Regulatory Commission in issuing a final certificate for the approved transportation system, to be the most likely date for the approved transportation system to begin operation; and

(2) for the gas conditioning plant segment—

(A) upon completion and testing of the gas conditioning plant segment so that it is proved capable of operation; and

(B) not before a date certain, as determined (in consultation with the Federal Inspector) by the Federal Energy Regulatory Commission in issuing a final certificate for the approved transportation system, to be the most likely date for the approved transportation system to begin operation.

Waive Public Law 688,[3] 75th Cong., 2d Sess. [Natural Gas Act] in the following particulars:

Section 7(c)(1)(B) of the Natural Gas Act to the extent that section can be construed to require the use of formal evidentiary hearings in proceedings related to applications for certificates of public convenience and necessity authorizing the construction or operation of any segment of the approved transportation system; *provided*, however, that such waiver shall not preclude the use of formal evidentiary hearing(s) whenever the Federal Energy Regulatory Commission determines, in its discretion, that such a hearing is necessary; and

Sections 4, 5, 7, and 16 of the Natural Gas Act to the extent that such sections would allow the Federal Energy Regulatory Commission to change the provisions of any final rule or order approving (a) any tariff in any manner that would impair the

[3] 15 U.S.C. § 717.

recovery of the actual operation and maintenance expenses, actual current taxes, and amounts necessary to service debt, including interest and scheduled retirement of debt, for the approved transportation system; or (b) the recovery by purchasers of Alaska natural gas of all costs related to transportation of such gas pursuant to an approved tariff, and

Sections 1(b) and 2(6) of the Natural Gas Act to the extent necessary to permit the Alaskan Northwest Natural Gas Transportation Company or its successor and any shipper of Alaska natural gas through the Alaska pipeline segment of the approved transportation system to be deemed to be a "natural gas company" within the meaning of the Act at such time as it accepts a final certificate of public convenience and necessity authorizing it to construct or operate the Alaska pipeline segment and the gas conditioning plant segment of the approved transportation system or to ship or sell gas that is to be transported through the approved transportation system; and

Section 3 of the Natural Gas Act as it would apply to Alaska natural gas transported through the Alaska pipeline segment of the approved transportation system to the extent that any authorization would otherwise be required for——

(1) the exportation of Alaska natural gas to Canada (to the extent that such natural gas is replaced by Canada downstream from the export); and

(2) the importation of natural gas from Canada (to the extent that such natural gas replaced Alaska natural gas exported to Canada); and

(3) the exportation from Alaska into Canada and the importation from Canada into the lower 48 states of the United States of Alaska natural gas.

Waive Public Law 94-163 [4] [Energy Policy and Conservation Act] in the following particulars:

Section 103 as it would apply to Alaska natural gas transported through the Alaska pipeline segment of the approved transportation system to the extent that any authorization would otherwise be required for—

(1) the exportation of Alaska natural gas to Canada (to the extent that such natural gas is replaced by Canada downstream from the export); and

(2) the importation of natural gas from Canada (to the extent that such natural gas replaced Alaska natural gas exported to Canada); and

(3) the exportation from Alaska into Canada and the importation from Canada into the lower 48 states of the United States of Alaska natural gas.

[4] 42 U.S.C. § 6201, *et seq.*

O

> The sponsors have moved the engineering of the project to the point that we know now that the project can be built and can be built within normal construction contingencies.
>
> Having reached this point, I feel very strongly that we now need to take that next step. We need to give the project the opportunity to move ahead. The way to do that is the waiver package, so that the project can be privately financed and we can move ahead with it.

Rhett was not convinced that the billing commencement waiver placed the consumer at any appreciable additional risk for project noncompletion.

> I personally believe that, given the current status of the engineering; the relationship that we have with Canada; the outstanding working relations we have with the State of Alaska; and our detailed knowledge of the project - including both the conditioning plant and the pipeline; the risks [of noncompletion] are minimal. /273

McMillian's testimony, accompanied by a long and detailed written statement, was rather brief. It focused on the project's very dramatic cost escalation, which he attributed to "double digit inflation and high interest rates." /274 He implied that ANGTS could have been built under the original suppositions and limits imposed by the ANGTA and the President's Decision, had inflation and interest rates either held fast or increased more moderately. Fair play, he argued, demanded that the ANGTS rules be amended in accord with gas market and macroeconomic phenomena. Robert L. Pierce, president and chief executive officer of Foothills, the Canadian consortium, reaccounted the treaty obligations and formal declarations between the U.S. and Canada. /275 He and Blair, who accompanied him at the hearings, stated that the waivers represented only minimum compliance with American assurances, both by the President and the Congress, to facilitate the project.

There were, throughout the Senate hearings, only two vocal critics in the crowd: Sen. Howard M. Metzenbaum (D-Ohio) and Edwin Rothschild, director of the Energy Action Educational Foundation. Metzenbaum found the waivers "unfair and unequitable and unjust." /276

> I think we have before us today another example of those who speak loudest in favor of free enterprise system and who continually ask for their government to keep its nose out of their business operations coming to their government asking for a subsidy; in this case asking that the consumers of this country subsidize this gas pipeline. They [waiver advocates] are asking us to waive Congress' original requirement that there would be no obligation on the part of the consumers to play for any construction costs prior to the pipeline providing service. /277

Metzenbaum objected to two "dangerous precedent[s]" which he saw the waiver package establishing. First, consumers would be required to

assume financial risks "that properly belong to the pipeline's creditors and investors. Under this legislation," he added, "it is entirely possible that consumers would be forced to pay a fixed cost in their gas bill each month for the entire 25 year life of the pipeline without any gas being transmitted." Second, gas conditioning plant inclusion was inappropriate because the plant was a production, not a transmission, facility. Conditioning plants, by FERC rulings and as the President's Decision stipulated, were not included in pipeline rate bases. "It is unfair to relieve Exxon, Arco, and Sohio from their responsibility to construct this $4 to $6 billion facility," Metzenbaum insisted.

He concluded:

> I realize that many of my colleagues claim these waivers are necessary for the pipeline to go forward. I must point out, however, that if the pipeline is unable to attract sufficient investment capital on a venture that offers a 30 percent rate of return after investment tax credits, then I suggest the market is determining that at $30 billion the pipeline is too costly.... /278

Rothschild's concerns were very similar to Metzenbaum's. "The waiver package from our [Energy Action's] point of view is not in the public interest," he stated flatly. /279 "It clearly demonstrates that the free market is not willing to put up the capital because the project is viewed by the financial community as far too risky to undertake."

> The waiver package would deny consumers the basic protections inherent under the Natural Gas Act because it would waive sections 4, 5, 7 and 16 of the act. These sections are the heart of the law which protects consumers from the monopoly power of pipelines. /280

Rothschild also objected to producer equity ownership and gas conditioning plant inclusion waivers. "What is most surprising," he concluded, "is, even if Congress passes these waivers, the banks and financial community are uncertain about the pipeline's financial health. No one who has testified from the financial community," he added, "was willing to say they would not be back seeking more consumer or Federal support."

This, indeed, may have been a concern, as the original context for project financing had changed with the submission of the waivers. In 1977, as the President prepared to announce his Decision, McMillian submitted a memo from his chief financial advisor, Mark Millard, vice president of Loeb Rhoades, stating "there is sufficient credit support capacity among the primary beneficiaries of gas pipelines excluding the consumer to assure completion of the pipeline." /281 McMillian, during the Litt hearings and afterward, repeatedly claimed that his project could be financed without consumer or governmental underwriting - a contention which El Paso and Arctic Gas sponsors criticized and were

loathe to make of their own plans. Now, by requesting the waivers, he was seen by some as breaking a pledge, a pledge which in part had won Alcan (NWA) the ANGTS franchise. Of course, inflation, high interest rates and gas deregulation had conspired against McMillian's efforts to meet the original conditions, but that would not, among some observers, entirely compensate for a preceived broken trust.

The financial testimony, offered by the investment banking group enlisted by McMillian in June to study his plan, suggested that the ANGTS sponsors, producers and the investment community, even after waiver package, might not raise sufficient funds to finance ANGTS. The bankers, from Bank of America, Chase Manhattan, Citibank and Morgan Guaranty Trust Company, had appraised McMillian of this fact on August 28, 1981. /282 They reported that the ANGTS, to be built, must receive at least "the equivalent of an A/Baa credit, [which would enable a] maximum amount of Project credit available for the Alaska segment...to be between $12 billion and $18 billion." However, they stated catagorically that under NWA's current "completion pool of funds concept," which assumed "irrevocable commitments" by lendors to debt repayment, the rating would probably not be achieved and, therefore, the requisite funding could not be secured. /283

At the Senate hearings, the bankers were equally blunt. "I do not need to tell you," observed H. Anton Tucher, a Bank of America vice president who served as lead spokesman, "that in the private market the funding requirements for this project are truly monumental."

> The largest loans indicated on a global basis to my knowledge is $6 billion and that is to a triple A [AAA] rated corporate borrower. Using the $27 billion capital cost estimate that we have been given to work with and the proposed 75 to 25 debt equity ratio, the resulting $21 billion debt requirement is 3 1/2 times as large as the largest loans indicated up to this time. /284

The group, Tucher noted, could not assess the project's ultimate financeability until NWA had compiled a detailed equity plan of its own and they, as representatives of the investment community, could assess it in detail.

> With regard to the waivers, let me simply say speaking for Bank of America that we support the waiver package as a means of facilitating private financing. While I cannot assure you that with the adoption of these waivers private financing can be arranged, I know of no practical way of obtaining private financing if the package should fail to be approved. /285

"I wish I could be more definitive on the question of funding availability," he concluded in his written remarks, "than to say that, under the right set of conditions, it may well be possible to raise the required amount." /286

Murkowski, in his subsequent questioning of the bankers, deemphasized the financing uncertainty and stressed, instead, the fruits of project success: an increase in domestic gas supply, reduced reliance on OPEC oil, enhanced energy security, better relations with Canada, and an improved balance of payments. He did argue, however, that if the development of Alaska gas was in the national interest, as Congress had ruled, the waivers represented the preferred means of keeping the project alive. Although the original Alcan deal, he admitted, had been changed, the waivers constituted an adjustment of, not a departure from, the private funding premise. Although, he added, there was no guarantee that financing would follow the waivers, the project would surely wane without them.

On the other hand, one could not help but speculate upon the possible consequences of a failed, or false, start under the new waiver provisions. Reduced regulatory control and consumer prebilling, as Metzenbaum and Rothschild had warned, did combine to shift liability, large or small, from the sponsors, producers and investors to the gas customer, and this without any guarantee that Alaskan gas would ever be delivered. Could the waivers be a maneuver by the sponsors to escape the accumulating costs of their own investment folly? Were they another incremental step toward solicitation of federal financing or loans? If, in fact, project success was not ensured by the waivers, what repercussions might the package bring with failure?

In the House hearings, seven sessions held from October 21 to November 9 and sponsored jointly by Sharp's Subcommittee on Fossil and Synthetic Fuels and by Udall's own Subcommittee on Energy and the Environment, scrutiny was more intense. Many of the witnesses were the same: Edwards, Butler and Rhett of the administration; Governor Jay S. Hammond of Alaska; McMillian and Pierce of the sponsor consortiums; Tucher and his colleagues in McMillian's banking group. Testimony was similar but more elaborate than that offered in the Senate.

House members appeared to react to testimony with more interest and less optimism than their Senate colleagues. Sharp and Udall, in early examination and debate, were successful in highlighting what was perhaps the essential public policy issue: Without the waivers, the ANGTS initiative was temporarily lost. However, two points - NWA's pledge not to solicit consumer underwriting and skepticism involving project financing possibilities after the waivers - seemed to trouble the committee members. As Rep. Al Swift (D-Wash) observed:

> ...[W]e have established...that however remote it may be there is an element of risk, and the consumer is assuming [it without] sharing in any of the return if it is successful. /287

McMillian recalled the $40 billion to $90 billion net economic benefit which his economists projected that ANGTS would bring to the nation, but Swift replied that "you couldn't sell any stock on that

basis." If consumers were to serve as investors, the representative argued, were they not entitled to an investor's return, which was certainly more tangible and less diffuse than a "net economic benefit" they would enjoy as citizens? "...[O]ne of the things that trouble us," Swift continued, "is that we also were assured that it [ANGTS] wouldn't need any waivers."

> [There] aren't any good guys ...[or] bad guys here. It is just that one step leads to another and we find ourselves a little bit deeper in the quagmire, and we, as policymakers...have to make a judgment whether this is really worth taking the next step or whether this is the time to bag it. /288

John F. Seiberling (D-Ohio) echoed similar reservations. "You may recall," he reminded McMillian, "that several years ago when you appeared before...[the] Subcommittee on Public Lands, which I now chair, I strongly supported your proposal." /289 After all, Ohio, hit hard by winter gas shortages, was targeted for more ANGTS gas than any state but California. But now, "things have changed a bit," he observed, noting the project's "astronomical" cost escalation, resulting financing uncertainty and the prebilling waiver.

> Well, I must say that I think we have to review this whole thing all over again.... [T]his is not free enterprise when the public is committed by this decision, if we permit these waivers, to accept this kind of cost regardless of whether that is the going market price, otherwise or not. So, I think we need to look at this whole thing de novo. /290

Harold Rogers (R-Ky) asked Edwards "why should we ask the American public, the consumers of the gas, to finance basically a risk free project [for] the largest banks, the largest pipelines, the largest oil companies?" /291 "Well," Edwards replied, "the consumers are getting the benefit of this product, and if they want this tremendous resource brought down to them for their use, then don't you think that it is fair and just to let them share in the risk a little bit?"

Dingell's examination of the witnesses was particularly incisive. William Niskanen, a member of the Presidents Council of Economic Advisors, estimated that Alaskan gas would cost about $22/Mcf, well above the projected market value of $4/Mcf to $5/Mcf in a deregulation scenario. "Given an expectation that real fuel prices will increase only slowly during the 1980s," Niskanen observed, "it looks like it would be very difficult to market that gas." /292 Dingell questioned the efficacy of making special allowances (passing waivers) for a pipeline system delivering gas which would cost four to five times the average rate.

Dingell also delineated the financing gap, noted by Tucher and the investment banking group. The sponsors, under the waiver provisions,

had raised $8 billion and the producers, $9 billion, totalling $17 billion of the $27 billion required for financing. "That leaves about $10 billion yet to be secured," the chairman noted. Are we sure, he asked Edwards, it can be raised? "Mr. Chairman," the Energy Secretary replied, "that does not fall under my responsibility. I think it will be up to the sponsors and producers and bankers to come up with this additional money." /293

The financial outlook, even after the waivers, was not very bright. NWA's failure to raise more than $8 billion had led to the waivers. The Alaska state legislature repeatedly refused to contribute at all, despite the substantial royalties the state would enjoy upon completion. The banks, at the projected A/Baa rating, could not bridge the $10 billion gap. Even William D. Leake, ARCO's vice president in charge of the ANGTS, found the undertaking a "considerable risk," one in which his firm would "reasonably limit our stockholders'" liability. /294 All in all, the testimony appeared to suggest that, even with the waivers, the project would have difficulty finding funds and, even with financing, gas produced by it might be too expensive to market easily.

Two Arctic energy experts - Tussing and Jerome E. Hass, a Cornell University economist who had counseled the FPC and the OFI on the project - appeared to represent two opposing views in the ANGTA waiver debate. Tussing, in his prepared statement, agreed that "the Alaska gas pipeline project is in the national interest" and that "no technically and economically realistic alternative" to the trans-Canada line existed. /295 Nevertheless, he declared that "no pipeline will be built and Alaska gas cannot be marketed under the present law...with or without the waivers."

NWA's financing scheme, he argued, was untenable and gas regulation would make Alaskan gas unmarketable. "...[T]he crucial financing problem is the sponsor plan for nonrecourse project financing, which [stipulates that] the lenders rather than the sponsors...have to bear the risk of noncompletion, project failure, or nonmarketability." /296

> There is no chance whatsoever that the major insurance companies' pension funds and the like, which must provide the bulk of the debt for this project, will elect to bear the risk.
>
> For the...last seven years, we have seen the financial advisors, the investment banking community, come before various regulatory institutions, come before the Congress touting project-financed ventures of one sort or the other. Projects whose only security for repayment of debt...[are] the ultimate payments by the consumers. As a matter of fact, there has never been a successful nonrecourse project financing of a major energy project in the United States.
>
> In every instance I have been able to find there has had to be some creditworthy party who is willing to back the debt, to cosign the debts at least through the period of construction. /297

"In my view," Tussing concluded, "congressional rejection of these waivers will not destroy the pipeline project or even delay it." For ANGTS, he claimed, was long doomed, given its financing scheme and continued gas regulation. Even with deregulation, which would allow a higher sales rate for Alaskan gas later in the project's life, alternative domestic sources, at lower prices, would crowd the Prudhoe Bay gas out of the market. By Tussing's analysis, the waivers were analogous to an artificial life support system, merely prolonging the vital functions of a terminal patient without offering any prospect of recovery.

Hass, on the other hand, refused to dismiss the waivers as a futile gesture. The patient, he argued, was still alive, if seriously ill, and he would not recommend withholding the only medicine which offered any hope of recuperation, especially when the cost of treatment, as he saw it, was so low.

The primary "cost," to most observers, was consumer prebilling, but it did not distress Hass. First, prebilling was not automatic - it curred only after a sequence of specific events and it required FERC or OFI review for cost legitimacy. Second, prebilling, given project failure, did not appear to involve a very large amount of money. Fears that consumers would be paying $100 surcharges annually for years to come without receiving any Alaskan gas were unfounded, he stated. By Energy Department estimates, the average consumer would be liable, in the worst case scenario, for an ANGTS surcharge of about $18, or $1.50 a month for about a year. /298 This charge was so low, Hass explained, because the sponsors could recover only debt charges, not equity, before pipeline operation. Finally, in a regulated market environment, "the situation can be described as 'You can pay me now or you can pay me more later,'" Hass noted.

> With the return of and on equity held hostage, there is virtually no doubt that the entire system will eventually be completed. Thus consumers of the pipeline companies that purchase the gas are having no significant addditional risks imposed upon them with the passage of the waiver for the preoperational billing. They will have to pay some charges somewhat sooner than if the waivers were not permitted, but these payments would otherwise be added to rate base and be charged to the customers later, with interest. /299

As to the original Decision stipulation prohibiting producer equity ownership, "I can state categorically [that] we [the members of Schlesinger's ANGTS team which drafted the document] erred," Hass added.

> It was nonsensical to believe the producers would be willing to take down a guaranteed debt without commensurate control over the project during the planning and construction stages. /300

Tussing and Hass, however, did agree on the virtues of deregulation, which would dispel the need for waivers altogether. "Under deregula-

tion," Hass explained, "consumers would bear no ANGTS risk since, regardless of whether the project was completed or not and regardless of its cost, the price they would pay would be set solely by competitive forces in the end user market." /301 Hass concluded:

> As responsible policy-makers, it is imperative that Congress provide a framework in which a portfolio of energy alternatives be allowed to develop. In the absence of deregulation, approving the waiver package, perhaps with some modifications, will provide an opportunity for the marketplace to judge whether this project should proceed.... If it turns out that world oil is abundant and cheap, and that large amounts of other gas are available at low cost, then the ANGTS project could end up a marginally costly (in an opportunity sense) venture. But if world oil and domestic gas supplies prove to be unstable and costly, the ANGTS project will be a real winner for us. To me the ANGTS project is like insurance for the nation, but even better: the downside risk appears small and the upside potential enormous. /302

The Tussing/Hass counterpoint was one of cynicism and optimism. Where Tussing saw the glass half-empty, Hass saw if half-full. The salient facts were not substantively disputed between the two. Tussing had become the project Cassandra, counseling the Alaska state legislature against financial involvement because of NWA's financing structure and emergent market indicators. Hass, a key operative on Schlesinger's ANGTS team and a major contributor to the President's Decision, was oriented toward project facilitation and was inclined to see a silver lining in the ANGTS cloud.

Final House committee testimony, absent from the Senate, included a variety of citizen action groups and public utility commissions, which were nearly unanimous in their opposition to the waivers. Most insisted that the project simply was not necessary, due to revised gas availability projections. As Daniel E. Muse, commissioner of the Colorado Public Utilities Commission, observed: "The Colorado Commission is concerned about the need to build the ANGTS project because there are no current shortages of natural gas in the lower 48 states, and the commission envisions no shortages in the foreseeable future." /303 "Times change and circumstances change," observed Milton R. Copulos, director of energy studies for the Heritage Foundation.

> If we look today, what we see is that [an] alleged shortage of natural gas never really materialized. In fact, a study soon to be released by the Department of Energy indicates reserve additions to domestic supplies last year were only two trillion cubic feet short of equaling our consumption. This not only reverses a trend which has predominated for many years but heralds the day when conventional supplies of gas will possibly meet all our needs without any problem. /304

Edward L. Petrini, an attorney with the National Consumer Law Center, added:

> Such as massive project, financed with forced ratepayer capital contributions would be enough to cause me to reassess the viability and desirability of the project. But when the [prebilling] proposal is coupled with reduced regulatory scrutiny, I think the case has been made for reassessment of alternative financing, including public financing, and alternative solutions to tapping...Alaskan [gas] reserves. /305

The House hearings closed on November 9, 1981. On November 12, the House Committee on Interior and Insular Affairs, chaired by Udall, reported favorably on H.J. Res. 341 by a substantial 32 to 9 count. Sharp's Subcommittee on Fossil and Synthetic Fuels directed the bill to full committee, 12 to 9, on November 17. Two days later, the House Committee on Energy and Commerce, by a 27-14 vote, sent H.J. Res. 341 to the House floor. /306

The same day, November 19, 1981, the senate bill, S.J. Res. 115, was called on the chamber floor. Nine days before, the Senate Committee on Energy and Natural Resources, chaired by McClure, had voted 14 to one to recommend approval of the resolution. Only Metzenbaum dissented. S.J. Res. 115, like any waivers of law governing the pipeline project, was governed by the expedited procedures of Section 8 of the ANGTA. First, the resolution was not amendable. Second, a motion to recommit was not in order. Third, debate was limited to one hour. Finally, the single hour must be divided equally between those favoring and those opposing the bill. /307

McClure introduced and managed the bill on the floor. After entering a letter from Edwards endorsing the waivers and a pro-pipeline Washington Post editorial into the record, he raised the usual arguments in favor of the package: enhanced national security, increased domestic gas supply, private project financing, lack of valid alternatives and our commitment to Canada. If Congress still wanted an Alaska gas transmission system in the next 10 years, he implied, the package offered the only chance - short of federal funding - to secure it. The Alaskan Republicans, Stevens and Murkowski, reinforced McClure's arguments.

Metzenbaum, as expected, represented the bill's opponents. He opened his rebuttal with typical drama:

> Mr. President, the measure we have before us is raw, it is crude, it is unfair, it is inequitable, it is unjust and it is the result of sheer and unadulterated greed. /308

He noted that, by the figures of the House Energy and Commerce Committee's own analysis, prebilling and conditioning plant inclusion could increase the average gas consumer's gas bill $50 to $97, and as

high as $232, depending upon where he lives. /309 He also read into the record a statement by John G. McMillian, which assured the House Commerce Committee on September 22, 1977, that consumers would not have to bear the hypothetical burden of ANGTS noncompletion. /310 "What kind of credibility is that," Metzenbaum asked. His attack was reinforced across the aisle by Sen. David Durenberger (R-Minn). /311

In the end, the Senate approved S.J. Res. 115 by a 75-19 count. Stevens' arguments, strategy and persistence had prevailed. Obviously, the Senate believed that ANGTS deserved a second chance. The prospect of Senate passage was never really in doubt, despite Metzenbaum's active opposition. The triumph, from a political vantage, was enabled by Stevens' influence as majority whip, support from the chamber's bipartisan conservative coalition, McClure's careful management of the bill in committee and on the floor, and the endorsement of Jackson, who persuaded other moderate Democrats to approve the waivers.

House approval, waiver proponents knew, would be much less certain. The House hearings, more extensive than their Senate counterpart, had stirred more skepticism. And while the committee reports did recommend approval, they also contained resolute dissenting opinions from admired conservatives, such as Brown and Broyhill, and influential liberals, like the late Phillip Burton (D-Calif).

On November 16, a day before Sharp's subcommittee approved H.J. Res. 341, Rep. Tom Corcoran (R-Ill) observed from the floor that he would "in the next several days...bring to my colleagues in the House information on...[the ANGTA] waivers." /312 The chamber, with this announcement, must have buzzed with curiousity. Corcoran, 45, was fast developing a reputation as a bold, skilled parliamentary tactician and a legislative maverick. He was rapidly increasing his own visibility through a variety of unconventional floor activities and by catapulting several obscure "free enterprise" issues into the Congressional limelight. Corcoran's approach to governance seemed to impress his colleagues strongly, one way or the other. To sympathizers, he was plucky and innovative, refreshingly unbound by the conventions of Congressional behavior; to critics, he was seen as a "show horse," perhaps more concerned with personal exposure than with public policy.

H.J. Res. 341 was called on the House floor about 1:15 p.m. on December 8, 1981, apparently a bit earlier than anticipated. It was governed by the same expedited procedures, specified in the ANGTA, which affected the senate version. Corcoran, caught somewhat off guard by the bill's appearance on the floor and knowing many of his allies to be absent, employed a pair of parliamentary stalling tactics to momentarily delay consideration until members could rush themselves to the chamber.

Udall, chairman of the House Committee on Interior and Insular

Affairs, which reported the resolution, introduced the waivers, briefly summarized their legislative history and, with some qualification, recommended passage. "I am a little ill at ease here today," he admitted, "arguing to my colleagues to approve this package of waivers. I am generally found with the consumer [groups on issues of this kind and] ...have not yet been selected as Exxon's man of the year, as far as I can determine." /313

Nevertheless, he continued, "it seems to me that the wise thing for our country to do is to approve this resolution," primarily for two reasons. First, ANGTS was "an unusual hybrid" project, which simply could not be built without special provisions which eased standard regulatory constraints and standard antitrust considerations. Secondly, "we twisted arms pretty hard to ge the Canadian Goverment and some of their provincial governments to come along [with us] on this. Udall did not want it said, by our neighbors to the North, that House of Representatives "was unwilling to give this project a last chance to put it together."

> So, the outcome is in doubt. Some people think the project, even with the waivers, will not survive. I believe it will have a fighting chance and I therefore urge my colleagues to vote 'yea' on the pending resolution. /314

Sharp, the House's technical expert on the issue, acknowledged that while the waivers did "create some potential risk for consumers, and [they do] depart from traditional regulatory practice," consumer risk was limited and sufficient regulatory safeguards remained intact. H.J. Res. 341, he emphasized, would increase the chance of project success, not merely cushion its failure for the sponsors. Despite provisions establishing "regulatory certainty" and waiving the evidentiary hearing requirement, FERC still had ultimate control over the sponsors through Alaska Leg certification and rate base review. The waivers, Sharp maintained, were simply "another step on a road our Government is already traveling," a step consistent with the original intent of ANGTA and not toward increased federal involvement. /315

Udall and Sharp, in the one-hour debate, were joined by Democrats Dingell and Jim Wright, by Republicans Arlan Strangeland (R-Minn), Richard B. Cheney (R-Wyo) and, of course, Alaska's Don Young. Carroll Hubbard, Jr. (D-Ky) reminded his colleagues that "it is important to keep the real issue in perspective. We cannot," he explained, "amend the waiver package or pick and choose only those provisions we favor. Our sole decision [in accord with the ANGTA] is whether to approve the President's proposed waiver of law." /316

Corcoran, however, was not content to work within this limiting perspective.

> It seems to me that this [the waivers] is an issue of consider-

able substance, and the original intent of the [ANGTA] was that waivers could be presented to the Congress for concurrence by the President in the event that there was some minor, technical problem with respect to a permit, a certificate of convenience, or some other decision [of a noncritical nature]...with only 1 hour of debate. This is reasonable for [such] minor issues but this is a major, substantive matter and we deserve more time to debate it. Furthermore, everyone should at least be in town when we consider it. /317

Berkley Bedell (D-Iowa) identified what he saw as a basic paradox in the waiver approach:

Mr. Chairman, I too find it rather inconsistent that the proponents of the waiver package have contended that, on the one hand, the pipeline venture is so risky without approval of the prebilling provision that private capital cannot be secured, while on the other hand claiming that the risk is extremely small that consumers will have to be billed prematurely.... If in fact the pipeline is very likely to be completed on schedule and under budget, and the gas will be sold at competitive rates, then potential investors should be able to recognize the soundness of the project and be willing to lend it their support. /318

The substantive objections to H.J. Res. 341 were, by now, familiar. Jim Leach (R-Iowa) feared "a novel precedent will be established" by the prebilling stipulation, which allowed the sponsors to charge customers for project debt expenses regardless of whether gas ever entered into the system. Rep. Carliss Collins (D-Ill) bemoaned Alaska's failure to contribute to ANGTS financing, given the $20 billion in royalties it anticipated. /319 "I say, let us make the free enterprise system work," advised James Weaver, an Oregon Democrat. If the sponsors could not secure financing under usual circumstances, he stated, the market was trying to tell us something: the ANGTS was simply not ripe. /320

Other opponents insisted that expanding gas supplies, encouraged by deregulation, reduced any immediate need for Alaskan gas in the foreseeable future. Some members, upset by NWA's broken trust, wanted to reexamine ANGTS alternatives, including liquefaction and methanol production. Still others were rankled by McMillian's intensive lobbying on the bill and the House leadership's accommodation of proponents.

Tom Harkin (D-Iowa), like Corcoran, was angered by the House leadership's decision to adhere strictly to the ANGTA procedures:

One hour of debate on an excise tax that is going to cost the American taxpayers $37 billion. One hour to debate that. Tomorrow we will take 10 hours to debate a silly foreign aid bill.

What is happening in the House of Representatives? As the gentleman from California [Democrat George Miller] said, we are getting

wrapped up in all of this...rhetoric. It all boils down to this: You vote for this bill and you are voting for an excise tax, a $37 billion excise tax on the backs of the American consumers. /321

Clearly, a great deal of confusion and emotion came to surround the waivers. What did they actually imply?

Waiver 1: Producer Ownership and Participation

The waiver "permits 'ownership' by producers in every sense that other participants enjoy such ownership...and does not limit producer ownership to a minority share," such as the 30 percent which McMillian proposed. /322 The Carter administration had opposed producer ownership on antitrust grounds, although as Professor Hass observed at the hearings, it was unrealistic to expect the producers to provide debt service when they were precluded from holding equity or exercising any management control over the project.

The provision did have its limits. As Dingell pointed out, "FERC may not agree to producer participation which is inconsistent with antitrust laws, restricts access of nonowner shippers, or restricts expansion of the capacity of the system." /323 But FERC, Metzenbaum argued, lacked the expertise for such enforcement and Reagan's Justice Department, to his mind, had proved "totally unwilling to effectively and vigorously enforce antitrust laws." /324

Most members, however, believed with The New York Times that producer ownership "seems reasonable. Both the wellhead price of the gas and the pipeline transport cost are regulated; ordinary antitrust considerations don't really apply." /325 And they were listening when Professor Hass, in his House testimony, described as "nonsensical" the stipulation in the President's Decision, of which he was a principal author, which excluded producer equity ownership and management control. "I can state catagorically we erred," Hass stated flatly. /326

In any event, it was quite clear that the producers, under current market circumstances, were not about to provide funds without a substantial piece of the equity and management action. And without major producer involvement, it was unlikely the pipeline could be funded or built. Most members appeared to understand this. Antitrust reservations notwithstanding, they were now willing to grant the producers an ownership share.

Waiver 2: Conditioning Plant Inclusion

The waiver allowed the sponsors to include the $6 billion gas conditioning plant in the project rate base, which in effect designates it as a transmission facility. Such inclusion was most unusual. By both industry practice and FERC rulings, such plants were generally considered a function of gas preparation rather than transmission, thus the financial responsibility of the producers and not a component of the transportation tariff costs. Producers,

in other words, had to absorb the cost in their wellhead prices and not, like transmission firms, through ratebase inclusion. In effect, the provision reduced the producers financial risk by assuring them at the project's outset that conditioning plant costs were a legitimate transmission expense and would be reimbursed through cost of service.

Most waiver advocates argued that the producers would simply not build the necessary conditioning facility without such reimbursement assurances. The project was too uncertain. ARCO Alaska executives must have shuddered at the thought of constructing a $6 billion plant on the Arctic frontier without guarantee of pipeline completion or means of recovering investment. Given the relative security of gas production in the lower 48 states, the risk must have been viewed as unacceptable. Assured cost recovery, advocates concluded, was the only path to conditioning plant financing.

Metzenbaum opposed the waiver for the same reason that advocates had supported it: project uncertainty. ANGTS, even with the waivers, would be a precarious enterprise. Given the prebilling and "regulatory certainty" provisions, coupled with certain FERC decisions, it was conceivable, if somewhat unlikely, that consumers could be saddled with financing a half-completed plant in the event of project failure. Metzenbaum would not agree to consumer underwriting, especially since, as John E. Bryson, a California Public Utilities Commissioner, observed, consumers would not share in "the [profits] derived from the natural gas liquids extracted from the plant." /327 The plant, Metzenbaum concluded, enabled producers' profits and therefore should entail producers' risk. Finally, some members feared that inclusion would set a precedent, one which they did not intend. Many would allow rate base inclusion for the ANGTS conditioning plant, but would certainly deny its application to conventional projects.

All in all, members again generally appeared willing to grant the waiver, despite apprehensions similar to Metzenbaum's.

The ANGTA, remember, required that the waiver package be assessed and approved in its entirety, without amendment, deletion or alteration. Congress was precluded by law from making marginal adjustments to the President's waiver recommendation. Had the package been subject to revision, members might have considered and adopted these first two waivers - producer ownership and conditioning plant inclusion - without the acrimony which accompanied the full waiver package.

Waiver 3: Prebilling

No waiver was more controversial and, if Dingell was correct, more misunderstood, than the prebilling provision. The waiver had two objectives. First, it would conform FERC tariff provisions to those approved by the Canadian NEB, which provided for full cost of service recovery for the Canadian Leg. This guaranteed Foothills, the Canadian group led by Blair, that its legitimate project costs

could be recovered from American gas consumers, regardless of the project's ultimate outcome. Second, it allowed the Commission to "fashion a tariff that will provide an assured source of revenue for the payment of a minimum bill tariff. Such a tariff," the President's waiver synopsis continued, "could conceivably go into effect in advance of completion of commissioning of all parts of the system." /328 In sum, this second stipulation allowed sponsors, including the Canadians, to begin charges for debt and operations costs, under certain circumstances, before ANGTS completion and even in case of failure.

The waiver represented, in Murkowski's words, "a fair sharing of risk between investors and consumers." /329 Dingell, during the House floor debate, listed the limitations on prebilling:

- ° Prebilling could only include the debt and operating expenses of the sponsors, not their project equity.
- ° Prebilling would occur only under the "most unusual and unlikely circumstance" that one of the three ANGTS segments (Alaska Leg, Canadian Leg or conditioning plant) was completed and the other two not by a "date certain," established prospectively by the FERC as the most likely date for the entire system to begin operation.
- ° FERC has full discretion as to whether to allow prebilling and what amount may be prebilled.
- ° Prebilling, naturally, will cease when the unfinished segments are completed and the line begins to operate. At that time, consumers will be billed under standard procedures. /330

Most waiver opponents, as evidenced in observations referenced both above and below, would trace their opposition to this point. As Rep. Thomas J. Tauke (R-Iowa) remarked: "There is a very real possibility that the potential consumers of the gas could be left holding the bill for the full cost of a pipeline which was abandoned short of completion or left idle because the gas which was supposed to flow through it was found to be unmarketable." /331 Rep. Lynn Martin (R-Ill), confessing discomfort with being on "the same side as Ralph Nader," claimed not to care "if the pipeline companies make 50 per cent profit on their investment; but I do care if the consumers have to virtually underwrite the construction...with no guarantee that they will ever get gas in their homes in return." /332

How high could prebilling costs range? As noted earlier, Hass figured, at the most, about $1.50 a month for no longer than a year, or about $18. /333 Dingell's committee staff, as quoted by Metzenbaum, estimated somewhat higher average charge: $50-$97 for individual consumers and $16,294 to $32,411 for industrial users. /334 Although there existed disparities among the various estimates, no reliable source projected costs in excess of $100 for the typical natural gas customer, usually with that cost spread over several years in the instance of project failure.

One of the most erudite analyses of the prebilling waiver was offered by Rep. Marc L. Marks (R-Penn), in "Concurring Views" attached to the Dingell Committee House Report:

> ...Members have been concerned about the "pre-billing" provisions of the waiver package.
>
> I am, however, satisfied that the pre-billing feature cannot be implemented until the [FERC] certifieds a date upon which the project is expected to be finished. Even assuming the early commencement of construction, this completion date is not expected before at least 1986 [or five years after the start of Alaska Leg construction activity].
>
> In addition, the authority granted to FERC to authorize pre-billing is discretionary authority. There thus exists no certainty that the pre-billing provisions would in fact be implemented.
>
> Even assuming that such pre-billing occurs, I am satisfied that most, if not all, residential natural gas consumers will be willing to pay the estimated $1.50/month that pre-billing will likely entail in order to minimize the likelihood of the kinds of shortages that we experienced in 1976. /335

In the spirited rhetoric of floor debate, this brand of cool, dispassionate reasoning was not always present. Instead, ANGTA's limited procedures for bill consideration, Corcoran's parliamentary ploys, usual floor histronics, and the fear of encumbering constituents with a neddlesome "excise tax," perhaps for a commodity they might never receive, did appear to confuse the merits of the issue. In fact, the "worst case" consumer cost for prebilling, even in a failed project, was not overwhelming for the average consumer. And besides, the prospect of prebilling was remote in any event.

Waiver 4: Evidentiary Hearing Option

The Natural Gas Act "could be construed to require a formal... evidentiary hearing by the [FERC] on each application for a certificate of public convenience and necessity to construct or operate any segment of the ANGTS." /336 The waiver made the hearing optional, at the discretion of the FERC. The hearing, clearly, would be costly and time-consuming for the sponsors. As Murkowski remarked: "Given the extensive government scrutiny of the project over the past years, the FERC should not be required to initiate further elaborate hearings if in its judgment to do so would add little or nothing to the already voluminous project record." /337 His point was well taken. In the past 10 years, the ANGTS had been the subject of five separate and exhaustive sets of hearings, including the mammoth Litt Inquiry. No certificate application in U.S. history had even approached the scale of assessment and review afforded ANGTS.

However, Metzenbaum explained that "[e]liminating evidentiary proceedings means that consumers will lose their right to cross-examine the pipeline's witnesses and openly challenge their data and assumptions." /338 Given the rather substantial alteration of

ANGTA that the waivers implied, the hearings might be seen to take on a new relevance. But, as waiver proponents added, FERC still retained authority, under the waiver, to order the hearing if circumstances required it. Most members appeared willing to allow the waiver, reassured by the FERC discretionary clause.

Waiver 5: Regulatory Certainty

This waiver was proposed to "assure [ANGTS] lenders...that the income stream which serves as security for their loans will not be reduced below the level necessary to retire the principal of the loan and to pay the interest thereon." /339 This would be done by forbidding FERC from issuing or amending any rulings which might hinder the lenders' chance of recovering investment.

"The financial markets," Dingell explained on the House floor, "indicated an unwillingness to undertake the financing of the project unless they were assured of the terms governing the recovery of debt. Once FERC has issued its final certificate of convenience and necessity [setting the initial tariff], it can only change the terms of recovery upon request of the sponsors." /340 Indeed, H. Anton Tucker, spokesman for McMillian's banking group, characterized the scheme as a "riskless venture" for investors, although the sponsors would be putting their equity (about 25 percent of $40 billion) on the line. It was, along with the prebilling stipulation, the requisite sweetener which proponents desired for project funding.

But regulatory certainty was seen by Durenberger as a "Trojan horse," with hidden and undesirable dimensions. /341 First, regulatory certainty, when coupled with the prebilling waiver, made natural gas consumers liable for the project's debt portion, about $30 billion, "if for some reason the pipeline were built and commissioned but later abandoned," he explained. Although the probability of this occurring was admittedly low, occasions did exist: A dramatic new technology enabling a different, cheaper fuel substitute; discovery of extensive new domestic reserves; or an act of God which might render the pipeline or the gas field useless.

Second, the FERC would be forbidden from lowering the tariff to share any unanticipated sponsor production or transmission savings with consumers. If, perhaps, an original tariff were approved to recover debt at a rate of 2 billion cubic feet per day and the system was upgraded to recover 3.2 Bcf, the difference might legitimately be retained by the pipeline partners. FERC could not, as it could ordinarily, as easily lower the tariff so consumers could enjoy a share of the sponsor savings.

The likelihood that either of these developments might occur, again, was not very high. Failure after commissioning was extremely unprobable, since sponsors had nearly $10 billion equity at risk, and FERC had means apart from regulatory revision for controling project costs and the resulting tariff.

Despite this analysis, which underscores the limited effects of the individual waiver proposals, opposition could not simply be dismissed as a fool's tale, "full of sound and fury, but signifying nothing." Waiver opponents, such as Durenberger and Broyhill, were not without justification for their positions.

First, some opponents based their dissent on the cummulative effects of the package instead of the isolated, individual impact of the discrete waivers - as provisions were often posed by bill managers. Prebilling and regulatory certainty together, for instance, appeared much less acceptable to waiver foes than they did when viewed separately, and with reason: they created the possibility that American consumers could be forced to finance a gas transmission system without ever receiving any gas from it. Conditioning plant inclusion, coupled with prebilling and regulatory certainty, raised by as much as $8 billion the bill which consumers might have to pay. And the evidentiary hearing waiver may have denied them any final voice in the matter. Clearly, the cummulative effects of the package warranted pause and concern.

Second, opposition was aimed more frequently at the larger principle rather than the particular instance of waiver embodiment. Admittedly, the ANGTA waivers would not, in the worse case, bankrupt American gas customers, but its regulatory precendent, in perhaps a later and even more extensive application, could bring considerable hardship. Natural gas regulation had evolved over a half-century of political and judicial determinations. Would the Congress cast aside five basic principles just to facilitate ANGTS? Furthermore, in the ANGTS instance, prebilling could open the way for subsequent concessions. Congress would, after all, feel additional pressures to aid the project once consumers, with the waiver package, were ultimately responsible for underwriting.

Third, still other opponents saw the waivers as a futile grant. Financing, McMillian's own bankers admitted was not imminent, even after waiver passage, given the projected gas market structure and other associated factors. The market would be determinate. Experts predicted a tight market into the 1990s, given industry deregulation, plentiful Canadian imports and reduced demand. If Alaskan gas could not sell, the waivers' break to the producers, sponsors and investors on the transmission system was of little consequence. On the other hand, if market demand was high, the waivers would not be required for project success. The waivers, by this analysis, were largely incidental. Many congressmen were not anxious to grant waivers, at possible consumer expense, which might not expedite the project and, instead, could create unnecessary sponsor/producer "privileges" and reduce regulatory control once the market had revived and the project became viable again.

Finally, some congressmen could not abide the thought of rescuing McMillian, NWA and Alaska Northwest, even if withholding the waivers implied project demise or abandonment. McMillian, simply by requesting

the waivers, had broken his initial pledge in 1976, when he had dismissed the need for consumer backstopping while in competition for the franchise. His two leading competitors, El Paso and Arctic Gas, had admitted that governmental or consumer involvement might be necessary, certainly disadvantaging their applications by comparison with McMillian's claims. Furthermore, members had noticed that Alaska Leg costs, originally set at $2.4 billion in 1976 during the Litt hearings, had increased four times by 1980, after the franchise had been secured. By contrast, no other project component (leg) increased by more than 75 per cent during this time.

McMillian's intense lobbying on Capitol Hill, while contributing to party organizations and perhaps endearing some congressional leaders, offended many members. He left, among some, the impression of trying to "buy" the waivers, through generous and timely Democratic Party contributions and through expensive consulting channels to Reagan's top White House staff. These members did not like the reflection McMillian's approach cast upon the Congress, especially in the wake of the "Koreagate" scandals. The House, at this time, was particularly vunerable to charges of corruption or special interest pandering.

As waiver proponents tried to focus on the narrow "merits of the issue," the efficacy of the individual waivers, opponents had established a much wider frame of reference. Their dissent eminated from fears of the package's cummulative effect, the possibility of undesirable regulatory precedents, poor financing prospects even after the waivers, and, among some, an aversion to assisting McMillian still further.

Many members, perhaps willing to follow the House committees' lead when the waivers were first surfaced early in the summer, now paused. The package, as we have seen, posed a complicate matrix of policy implications, some of which were not easily discerned by a congressman unfamiliar with the project's history. Broyhill's dissent and Corcoran's parliamentary tactics, among other developments, focused congressional interest if, as Dingell charged, they did not always clarify it. Broyhill's rejection of a Presidential initiative, perhaps more than any other single action, flagged the waivers as an issue of conscience, thus one due careful consideration. Corcoran's maneuvers provided high drama and high profile. The scenario had changed. Stevens and Murkowski might still gain their waivers, but not without controversy which they hoped to avoid.

Debate, on December 8, 1981, closed after an hour in accord with the ANGTA rule and a vote was scheduled for the following day. Late morning on December 9, H.J. Res. 341 was called before the chamber for consideration. After a plea for additional debate by Rep. Richard Ottinger (D-NY), a waiver opponent, was rejected, the chamber voted 233-173 in favor of the package. Seemingly, the issue was finally decided. Immediately after, however, as Udall sought unanimous consent to approve the identical S.J. Res. 115, Corcoran rose to object. The

chamber was stunned. Never before, in Udall's 20 years in the House, had he recalled anyone objecting to a unanimous-consent request by a bill manager who, upon passage of a House bill, asked the chamber to approve an identical Senate version. Corcoran shocked the leadership by employing a very rare dilatory parliamentary tactic to temporarily suspend the bill, a measure approved by both Houses and requested by the President of his own party.

The House leadership, by the next day, would compose and approve a new rule which would prevent Corcoran's interference, but his ploy and the ANGTS made front pages across the nation. Reporters, until this time often unacquainted with the project and the waiver package incidentals, stepped quickly into the controversy, generally in opposition. The New York Times, in an editorial, was typical in its counsel against the package:

> The prize is tempting but the price is daunting. If the people who know energy markets best - the oil companies and the financial institutions that back them - aren't willing to take a chance, then why should the public? /342

One highly-spirited analysis of the waivers was issued by Bill Moyers in a CBS Evening News commentary.

> Four years ago, the Federal Government [through ANGTA and the President's Decision] gave [John G. McMillian] exclusive rights to build a big pipeline to bring gas all the way from Alaska to consumers in 42 states. He got that franchise on the condition that the pipeline would be built with private funds. But now John McMillian wants to change the rules. He says he's having trouble getting the banks to finance the project, and he wants consumers to put up the money before the project is finished and whether or not a drop of gas is ever delivered. That's right. He wants the government to force consumers to be his investors. They would assume the risks of stockholders, but without voting rights or dividends. /343

Moyers continued to describe McMillian's extensive lobbying enterprise and his heavy spending on Capitol Hill.

> Shifting the burden of investment from corporations to consumers [Moyers concluded] wasn't the only way to finance this project. But other alternatives were never considered becasue John McMillian and the [producing and sponsoring] companies know the right people in the right places at the right price.
>
> So much for all that Republican talk about free enterprise. And so much for a Democratic Party controlled by lawyers and lobbyists who have offered its soul to the company store. On this bill, the two-party system was not up for grabs. It was up for sale.

The following day, on December 10, 1981, the waivers rule allowed a second hour of House debate before S.J. Res. 115 was once again voted upon. Corcoran, optimistic in the wash of all the publicity his parliamentary ploy had attracted, did not oppose the new rule. He was prepared to win or lose on this round. Debate proceeded along familiar lines, with Sharp, Young and Wright leading waiver proponents and Corcoran, Ottinger and Broyhill directing the opposition. Finally, the hour expired and Udall again called the question. The waivers, by a 230-188 count, passed once more.

A variety of factors probably contributed to waiver passage. Certainly, endorsements by the party leadership and the controling committees contributed significantly. No doubt, some individual members did not find opportunity to carefully examine the issue's details and, consequently, followed leadership or committee recommendations to support the measure. On technical, low-profile issues, both Houses often rely on the expertise of specialized committee members to shape and guide chamber decisions. It might likewise be said, however, that some congressmen were compelled to learn far more about the issue than they really cared to, due to the controversy which arose from it.

Second, the usual ANGTS energy arguments, related to energy self-sufficiency and national defense, prevailed among many members, including Jackson and Wright. ANGTS, Wright advised members, was "one way that we can strike a blow for [American] energy independence." /344 "We marched up this hill after each of [our] last two [oil] crises and vowed to do what is necessary to make the United States energy independent again," he continued. "Where has that resolve gone?"

Third, the ANGTS waivers, despite reducing the regulatory grip, involved no direct federal subsidy or loan guarantee. Fourth, as Rep. James H. Scheuer (D-NY) remarked: "[W]e are faced with a condition and not a theory. The condition is that we must choose not between this [package] and a better deal, which I would have liked. It is this deal or...the very great likelihood of doing nothing for a long period of time." /345 Proponents argued, even if one was not particularly impressed with the package's provisions, that there existed no short-run alternative to the ANGTS and NWA.

Fifth, some members believed with the Washington Post that "rejection would...constitute a gross betrayal of the Canadian Government." /346 The United States had, since 1977, repeatedly offered assurances of support and facilitation to the Canadians. It was upon such reassurances, Rep. Manual Lujan, Jr. (R-NM) reminded his colleagues, that "the Canadian Government agreed to allow us to build 2,000 miles of this pipeline through their nation" and, through the prebuild, to import extra gas from its Alberta fields. /347

Still other factors, not associated directly with waiver merits, might have contributed to passage. Legislative management by the leadership, both in committee and on the floor, was very strict and

limited opportunities for opposition to develop its arguments. The closed rule, specified in ANGTA, precluded amendment and limited debate to a single hour. Opponents maintained, with some justification, that the ANGTA rule was intended for noncontroversial technical matters, not ANGTS concerns as dramatic or substantial as the waivers. Furthermore the extensive producer/sponsor lobbying effort must have had some impact on member voting. New York Times reporter David Shribman felt this was a profound influence: "[M]onths of furious lobbying," often on a one-to-one basis with leading congressmen, won McMillian "one of the most spectacular private legislative victories of recent years." /348

Finally, and perhaps most important of all, the merits of the waiver issue itself, discussed at length above, did appear to suggest that passage might facilitate private financing without seriously jeopardizing regulatory control or placing the consumer at substantial monetary risk. Congressmen, like Marks, who did manage to cut through the confusion to the issue's core, understood this. Dingell, and other congressional leaders, recognized ANGTS might not find money, even after the waivers. But, unlike The New York Times, they did not see the price as "daunting," given the safeguards they maintained.

Many opponents, such as Broyhill and Bedell, rejected the waivers as unwarranted concessions, in light of NWA's broken pledge, or as a futile gesture, given the uncertain prospect - dim, by some accounts - for financing even after the waivers. Their dissent was often deeply grounded in general principle.

Occasionally, opponents tended to simplify or overstate their case, thus promoting a false understanding of the genuine merits of the issue. This exaggeration tended to confuse unschooled colleagues, precipitating inflated floor rhetoric and misleading the media, anxious to capitalize on the issue's more dramatic elements. It was, for instance, most improbable that prebilling would ever occur. And, even if it did, it would involve, as far as the individual consumer was concerned, only a rather small amount of money. Opponents did not always attempt to make this clear. True, the waivers, in aggregate, did reduce regulatory oversight, perhaps significantly under some circumstances. However, any member who truly believed, as some charged, that consumers would likely have to finance a $30 billion failed project did not sufficiently understand the real risks involved.

In any event, the package was passed and, on December 15, 1981, Reagan signed the waivers into law. Media and public reaction to the measure was uniformly unfavorable, often quite virulent. Newsday characterized the waivers as "a bum deal, and we hope a planned court challenge," sponsored by Metzenbaum and 37 others, "succeeds in blocking it." /349 The Boise Idaho Statesman, under the heading of "Cronyism 1, Capitalism 0," called the ANGTS, after the package, "a potential boondoggle of major proportions." /350 A St. Petersburg Times editorial likewise rejected the "greased pipeline." /351 "Deals usually stink,"

the editors wrote, "when lobbyists buy their way into both political parties to obtain governmental favors at the expense of the public." "The more you study this dubious [waiver] scheme," the Syracuse Post-Standard claimed, "the worse it looks." /352

Opponents, shortly after the vote, vowed to fight the decision in court. On January 28, 38 parties, led by Metzenbaum and including more than 20 congressmen, five states, the Consumer Federation of American and Ralph Nader, united in a suit against the FERC, filed in the U.S. Court of Appeals for the District of Columbia. /353 The plaintiffs maintained that the waivers were invalid under technical interpretation of ANGTA, which they claimed required assessment of the Senate version in House committee and forbid successive day consideration of the House and Senate versions. /354 The complaint, as relief, asked that prebilling, regulatory certainty and evidentiary hearing portions of the waiver be enjoined from enforcement.

Under the ANGTA's expedited judicial review process, the U.S. Court of Appeals heard oral arguments on April 8, 1982, and issued its decision, in favor of the government, on April 22. The court, in its ruling, found that "the circumstances under which the complainants fear consumers will be subject to unjust and unreasonable rates are as yet hypothetical; unjust and unreasonable rates are certainly not required by the waiver, and complainants have failed to identify any property that has allegedly been taken by the operation of the act." /355 The judges asserted that the prebilling issue was "not now ripe for decision," but that "complainants remain free in the future to raise claims." Metzenbaum, though disappointed with the ruling, was pleased with the opportunity for later challenge. The court, he claimed, has "open[ed] the door for a strong constitutional case when and if any efforts are made to bill consumers in advance for a pipeline that may never be finished." He would, he explained, relent until then.

The waiver controversy, after eight months of intensive activity, faded into history in the early months of 1982 as quickly as it had burst upon the legislative scene. Lawmakers, apart from Metzenbaum, Corcoran and a few others, turned their attention away from the pipeline. The issue, with waiver approval, was now off the public agenda and back before the private sector.

The East Leg Experience

If, for ANGTS proponents, frustration was the bitter harvest of Alaska Leg efforts, the East Leg experience would bear sweeter fruit. After a false start in North Dakota, the Northern Border (NB) pipeline, from May 1981 into late summer 1982, rolled out 823 miles across the American Great Plains into the Midwest. Although the West Leg was the first ANGTS construction effort, complete on October 1, 1981, it consisted of only about 160 miles of new pipeline, with that passing over previously established right-of-way. It was not, in the genuine sense, a new enterprise. Likewise, the Western Delivery System (WDS), a 351-mile pipeline enhancement project, winding through Oregon, Idaho, Utah and New Mexico, constituted existing line supplementation. And the WDS, in any event, was only tangentially associated with the ANGTS, in that Northwest Pipeline Company, NWA's parent, was its sponsor and that it could, eventually, deliver excess Alaskan gas to expanding Sun Belt markets.

All in all, the East Leg could be considered the first full-scale ANGTS endeavor. First, its Phase I prebuild involved new U.S. pipeline construction from the Port of Morgan, Montana, on the Canadian border, southeast to Ventura, Iowa, where it joined with existing transmission and distribution facilities of the Northern Natural Gas Company. To this, a 395-mile Canadian section, sponsored by Foothills, was planned from Caroline, Alberta, where the ANGTS East and West Legs split, over Canadian prairieland to Monchy, Saskatchewan, across the border from Port of Morgan. This Canadian portion also involved new pipeline construction.

Second, deliverability, as well as line length, was on a grander scale. The East Leg, priced at about $1.25 billion for the U.S. prebuild, proposed a 42-inch, 1435 psi pipe, a pipeline somewhat larger than the 36-inch West Leg line. The NB pipeline could move 1.075 Bcf daily, although initial contracts were for only 800 MMcf/d. West Leg contract capacity, after Phase I, would be limited to about 240 MMcf/d. Third, the East Leg prebuild fell under the OFI's full range of regulatory and enforcement authority. The West Leg, due to its comparative low cost and simplicity, was not subject to all ANGTS regulatory procedures, such as the IROR or a full-blown "one-window" permitting process. Field monitoring and enforcement, as noted earlier, was also less extensive. The WDS was free from all but cursory OFI monitoring and, essentially, was governed by standard review procedures administered by the usual federal agencies.

Finally, while the West Leg was primarily a single-sponsor enterprise, managed by Pacific Gas Transmission Company (PGT), a PG&E subsidiary, the East Leg constituted a cooperative enterprise, along the lines of that which was required to build the Alaska segment. The impressive sponsoring consortium, the Northern Border Pipeline Company (NBPL), included several of the major Alaska Leg promoters. It was led by the

Northern Natural Gas Company, an Omaha-based subsidiary of InterNorth, Inc., a diversified and expanding energy development corporation, and consisted of McMillian's NWA; Panhandle Eastern Corp., Houston; Trans-Canada PipeLines, Toronto; and United Gas Pipeline Co., also of Houston. /356 Northern, on July 24, 1980, would announce the creation of the Northern Plains Natural Gas Company as NBPL's managing partner. Howard L. Hawks, an InterNorth executive, was named president of the new corporation. It was through Northern Plains that NBPL would receive much of its manpower and expertise.

Unlike its companion section in Alaska, the East Leg prebuild experienced relatively few private sector funding problems. On the contrary, funds came quickly and completely. If the federal government, with the ANGTA waivers, had served as a catalyst for Alaska Leg development, it initially acted as a drag on the East Leg sponsors. As J. Conrad Pyle, NBPL's first project manager, had explained to the Runnels' subcommittee in October 1979, the East Leg review and approval process had actually been slowed, rather than expedited, by its association with the Alaska Leg. Precautions required for Alaska construction oversight, he claimed, were being arbitrarily imposed on his conventional construction project, complicating it, delaying it and unnecessarily increasing its costs. He and his colleagues believed that their pipeline, in some respects, was being used by the federal government as a laboratory for subsequent Alaskan oversight, and they, like their West Leg counterparts, did not appreciate it.

On April 28, 1980, the FERC, in a 158-page order which elaborated upon the rate structure and established shipper tracking provisions, issued a certificate for construction of the East Leg prebuild. /357 About three months later, on July 17, 1980 the Canadian Government approved the prebuild concept, leaving only Interior's right-of-way grant in the path of East Leg construction. /358

Rhett, sensitive to sponsor criticisms of slow federal review procedures during the Runnels' hearings, intended to avoid such delays in the field permitting and compliance process. To this end, he hired Dennis E. Schroeder, a young Montana civil engineer, to open and head OFI's East Leg Field Office in Omaha, Nebraska. /359 Schroeder, for the past four years, had been assistant regional supervisor of Water and Land for the Water and Power Resources Service (formerly the Bureau of Reclamation) in Billings, Montana. Before that, he was a field representative to the Authorized Officer for DOI's Alaska Pipeline Office in Anchorage. In this latter capacity, Schroeder shared day-to-day monitoring responsibility on Alyeska's TAPS project. He was, therefore, no stranger to a major pipeline construction effort and the various activities it implied.

His job, in short, was to expedite regulatory determinations, avoid construction cost overruns and project delays, and enforce all certificate, right-of-way grant and various permit stipulations for the Nor-

thern Border (East Leg) prebuild. Schroeder's field staff would confront, in a very immediate way, the sometimes opposing tasks of facilitation and enforcement, of expedition and regulation. His field inspectors were to accomodate construction, but only in a mechanically sound and environmentally safe manner. The inherent problem, of course, was that construction speed and regulatory compliance were not always consistent goals. OFI's East Leg staff saw their mission as helping NBPL reconcile these two objectives. Schroeder, as field office director, was also assigned to supervise environmental monitoring and review the sponsors' cultural resource (archeological) work along the route.

After the FERC certificate award, NBPL worked with Interior for its right-of-way grant and with the various state governments for certificates of corridor compatibility. Several states expressed concerns over the sponsors routing, but differences were generally negotiated away. On September 12, 1980, however, the North Dakota Public Service Commission (PSC) rejected NBPL's application for certificate and offered an alternative route which the commission deemed environmentally superior. /360 This would become the first major challenge to the ANGTS.

In March 1979, NBPL had sent a letter of intent to file application to the PSC. On December 15, 1979, the application, which specified the East Leg route, was filed and by early January 1980, the sponsors were notified by the commission that its application was complete. The North Dakota commissioners, aided by various agencies of the state government, assessed the route throughout the first nine months of 1980. In the meantime, of course, FERC issued its East Leg certificate, which approved the route and precluded all but minor modifications to its course. Rhett, cognizant of the PSC's discontent over the route, wrote the North Dakota commissioners on May 21 and August 28 to assure them that their environmental concerns would not be ignored, but also that "...substantial realignments - such as those otherwise possible within the proposed expanded corridor...are now legally impermissible." /361 As an OFI press release observed at the time, "[s]ubstantial realignments ordered by the state agency [PSC] would directly conflict with Federal law, both ANGTA and the Natural Gas Act, and would therefore be unconstitutional." /362

In North Dakota, public opinion rarely rallies any national policy which incroaches upon preceived state prerogatives or provincial interests. On such occasions, Uncle Sam may appear a very distant relative. In any event, local sentiments quickly rallied to the PSC's side. An editorial, in the Grand Forks Herald, was illustrative:

> There is no perfect place to put a pipeline, and probably not even a very good one. But Northern Border Pipeline Company has chosen an especially bad route...from North Dakota's point of view. [Multiple river crossings could] be destructive to wildlife [and create] widespread erosion along the line in steep gullies of the Bandlands and Killdeer Mountains. This could leave permanent scars

on the land....

The North Dakota Public Service Commission [not the Federal government] must decide which route the company should follow. The northern route [recommended by the PSC] is the better one and the PSC should require it. /363

Tim Fought, a Herald reporter in Bismarck, later advised readers that the present NBPL route "could be a[n environmental] nightmare come true." /364

On September 26, 1980, only two weeks after the PSC denial, the OFI and the FERC filed joint suit in Bismarck's Federal District Court challenging the PSC determination. /365 The agencies argued that the PSC's rejection of the route was unconstitutional, because it contravened the ANGTA and the Natural Gas Act, that it represented an undue burden on interstate commerce, and that it interfered "with the exclusive and absolute authority of the federal government to regulate commerce with foreign nations," in this instance, the Canadian government on the pre-delivery issue. /366 The PSC, the plaintiffs charged, could not legally interfere with the federal government's legitimate authority to route the East Leg.

Apart from the critical legal issues, Rhett expressed three additional objections. First, the commission's claim that its recommended northern route was superior "has not yet been subjected to a detailed [environmental] analysis," such as that which the NB plan received. /367 The Federal Inspector believed, based upon that comprehensive study, that the proposed NB route, with proper mitigation, would not involve any significant damage. Second, Rhett maintained that the State of North Dakota failed to utilize proper opportunities, provided earlier by law and employed by other interested parties, to register its objections. Since 1975, there had been several reviews of the East Leg design, in which other affected private and public entities had helped pattern the path of the corridor. The review and comment process, Rhett claimed, concluded with the President's Decision, which designated the preferred route. The window of opportunity for amending the route, he maintained, could not remain open forever.

Finally, Rhett judged that the consequences of a major rerouting were too high to merit the decision. A route change would require the NBPL "to perform a whole series of new environmental analyses, archeological resource surveys, design work and easement acquisitions," he explained, and even then, the newly proposed route may not prove preferable.

The projects sponsors estimate that it would require at least 12-13 months to develop the site-specific data necessary to begin construction on a new route. This estimate does not include an allowance for a new FERC proceeding should such action become necessary. The consequence to project schedule and cost would be considerable, while the environmental improvements to be realized

are highly speculative. /368

On October 20, the North Dakota Public Service Commission filed a response to OFI/FERC charges in Bismarck district court. /369 The commission requested dismissal on grounds that the ANGTA did not "expressly preempt North Dakota's sovereign right to establish a corridor within the boundaries of the state." It maintained that the President's Decision established only general corridor boundries, "leaving to the state the authority to specifically site the pipeline."

The OFI and FERC returned to court on December 8, 1980, this time with NBPL attorneys, to file for summary judgment. /370 The three parties asked the court to declare the North Dakota Siting Act, under which the PSC made its determination, unconstitutional and to enjoin the commission from any future interference in the project. Bruce Hagen, a PSC spokesman, told reporters that the commission would study the brief before responding. "I don't agree with their motions," he observed, "and I expect we'll win it [the case]." A hearing was scheduled for March 9, 1981.

The East Leg sponsors, however, were apparently just as confident of success. On December 10, only two days after the summary judgment filing, the Northern Border Pipeline Company signed an agreement for a $1.055 billion loan from a consortium of North American banks, as described in the second section of this chapter. /371 Charles M. Ladley, spokesman for the banking group, noted that over 70 percent of the prebuild right-of-way had been acquired and, despite the North Dakota legal snarl, orders for 581,000 tons of 42-inch pipe had been placed for a spring 1981 construction start. Approximately $300 million worth of awards were split among Kaiser Steel Corporation, U.S. Steel and the Bethlehem Steel Corporation. /372 Bethlehem, on November 24, accepted the largest single order of steel pipe ever awarded by a domestic producer: 139,000 tons. /373 Additional contracts had been targeted for a Japanese steel consortium and an Italian firm. The sponsors also selected six mainline pipeline contractors for Phase I, which was divided into nine segments or "construction spreads." /374 The contractors were to begin construction in Spring 1981 and complete it by late Autumn 1981. NBPL, however, did not name contractors for the three North Dakota spreads.

Regulatory matters were being dispatched, as well. Schroeder, now in Omaha, was pulling together his small (eight to 10 member) OFI field staff, which would be supplemented somewhat by UII's technical experts during the construction phase. He would soon be officially designated as the OFI's "one-window" authority on the East Leg, hence the clearinghouse for all transactions and approvals between the sponsors and the federal government. On December 3, the Northern Border group delivered its three-volume final cost estimate, set at $1.238 billion, to the OFI. /375 It would be studied in Washington by Berman, OFI's director of Audit and Cost Analysis. Four days after Christmas, the OFI announced

approval of the East Leg sponsors' affirmative action and minority business affairs (MBE) contracting plan. /376

On March 11, 1981, only two days after Rhodell Fields, OFI's deputy general counsel joined FERC attorneys to argue OFI's case on the PSC dispute in federal court, the U.S. Department of the Interior issued the grant of right-of-way for the East Leg prebuild. /377 This was the final major regulatory approval required for prebuild construction. The document was signed in Billings, Montana, by Michael Penfold, state director of the Bureau of Land Management, and Hawks, representing Northern Plains, the InterNorth subsidiary which was NBPL's managing partner. It authorized a 54-foot-wide corridor across 20 miles of federal land, 17 miles in Montana and three miles in North Dakota. The grant did not include a 89-mile stretch across Indian lands in Montana, inhabited by the Sioux and Assiniboine tribes. Northern Plains planned to negotiate for the use of this right-of-way directly with the tribal councils.

NBPL staff, through late 1980 and early 1981, worked closely with various officials, from local chambers of commerce to state and local government agencies, to avoid the kind of misunderstanding and controversy which occurred in North Dakota. The firm was apparently rather successful. Although there were pockets of discontent, most relations appeared cordial. After all, local economies would receive a terrific boost. Landowners on the route were well compensated for rights and local merchants, preparing for thousands of new customers, anticipated and often enjoyed record profits. Other citizens, cognizant of the project's high priority in Washington, might have considered active opposition futile.

Major concerns from local perspectives included fears of topsoil damage, of incomplete restoration of farmlands, of shallow pipeline burial, of destruction of rural roads and even of high noise levels near gas compressor stations. In Jackson County, Minnesota, for instance, Northern Plains brought suit on March 13, 1981 against municipal officials who demanded a six-foot, rather than the standard three-foot, burial of pipe. /378 But this issue, like many others from village to town along the line, was eventually resolved. The states, apart from North Dakota, also fell into line. The Iowa State Commerce Commission, on January 15, 1981, issued its permit to Northern Border Pipeline Company officials while the South Dakota Public Utilities Commission issued its approval order later that spring.

On April 2, a North Dakota verdict was returned. Judge Bruce Van Sickle of the U.S. District Court for North Dakota granted a summary judgment in favor of the OFI and FERC in their suit against the state's PSC. /379 For ANGTS proponents, the judgment represented a victory in several important respects. First, it reaffirmed the federal government's supremacy in the direction of major construction projects, singled out by Congress, and sent a clear message to other governments and individ-

uals who may have thought of disputing such authority. Second, the ANGTA's provisions for expeditious adjudication appeared to work. Only slightly more than six months had passed from initial filing, in late September 1980, to final decision - a time frame which contrasted dramatically with the 43-month TAPS environmental stalemate. Unfortunately, the North Dakota spreads could not be started until autumn - delaying those sections and, consequently, the entire project an entire season - although other work progressed very close to schedule. In any event, the North Dakota suit would not hamstring the project.

Judge Van Sickle, in his decision, agreed that the ANGTA superceded state law, noting that its provisions "describe a pervasive scheme of Federal regulations directed to every aspect of this unique pipeline, including its route across North Dakota." The state statute, "as an obstacle to the accomplishment and execution of valid purposes and objectives of Congress," was declared overridden. /380 In addition, his decision noted, as the Federal Inspector had argued, that the state had failed to utilize the proper opportunity, available before the President's Decision, for route dissent and amendment.

With the lawsuit now resolved, Rhett turned his attention to the final regulatory actions. The Northern Border group, he knew, wanted to meet a May 1, 1981 construction start outside North Dakota and he intended to accommodate. On March 20, in a letter to Northern Plains, he had granted final design approvals. Three days later, he published a notice of his tentative decision on adjustments to the Certificate Cost Estimate, required for calculating the East Leg IROR. Then, on April 15, the Federal Inspector approved the final East Leg prebuild design cost estimate at $1.226 billion, about 12 million less than the sponsors had requested, upon the advice and Berman. /381 Finally, on April 18, he signed a Notice to Proceed for the six project spreads outside North Dakota. /382 This was the regulatory signal for sponsor construction to begin, and NBPL did not hesitate. Construction on the ANGTS East Leg began May 4, 1981, and the following day, about 500 people attended a formal groundbreaking ceremony at the initial construction site just south of Aberdeen, South Dakota. /383

Schroeder, in Omaha, was still organizing his operation when NBPL's contractors took the field, and once again, the OFI was caught short by project sponsors. /384 OFI engineering and environmental field agents, known as Federal Inspector Field Representatives or FIFRs, had little more time than their West Leg counterparts to participate in design review. Consequently, most did not have a very good understanding of sponsor plans and programs as construction began. NBPL's quick start and federal hiring delays had also limited Schroeder's opportunity to school his own people on the OFI "balanced evaluation" approach to federal oversight, although most were fast to take it up anyhow. In addition, OFI was unable to quickly produce a comprehensive field compliance manual for enforcement. A 60-page document, being prepared by OFI, would eventually consolidate agency monitoring guidance and

enforcement policies, critical for field review, but it was not available as soon as the FIFRs required it.

Despite these initial stumbling blocks, the office did accumulate a core of four qualified field inspectors, supplemented by five UII technicians. Their jurisdiction would span some 362 miles across four spreads in South Dakota, Minnesota and Iowa and another 177 miles over Montana. Rhett's oversight philosophy, which stressed system review and auditing rather than field surveillance, would receive the test it required before it could be considered for Phase II in Alaska.

OFI's field philosophy has been discussed at length above. Rhett and Schroeder believed that the sponsors' quality control system, if properly configured, maintained and monitored, would ensure field compliance largely on its own. In other words, a sound QA/QC system would self-correct most construction and environmental deficiencies. OFI's major responsibility, by this analysis, was to ensure satisfactory system design and development in the preconstruction stages and, after implementation, reinforce sponsor dedication to system integrity through system monitoring, regular reporting and field inspection. This oversight approach, as noted before, reduced the need for comprehensive surveillance, even though Schroeder did keep a Federal Inspector Field Representative, known as FIFR, on or near the construction site at all times. In short, Rhett believed that "enlightened self-interest," like the proverbial invisible hand, would guide the sponsors to implement credible QA/QC systems, as the eventual costs of nonconformance might be higher than those incurred by compliance.

In any event, East Leg prebuild construction, during the 1981 field season, did progress well, generally ahead of schedule despite heavy rains along Minnesota and Iowa spreads. The following chart indicates, as of June 30, 1981, the status of the 539 miles of pipeline construction in Iowa, Minnesota, South Dakota and Montana.

Activity	Miles	
Temporary Fencing	433	
Clearing/Grading	417	
Stringing Pipe	195	
Trenching	201	
Bending Pipe	169	
Welding Pipe	114	
Coating/Lowering Pipe	86	/385

By October, the entire 539 miles of pipeline under construction this first season, the whole East Leg prebuild line outside North Dakota, was completed, with 430 miles successfully hydrotested. Construction began in North Dakota in early September, although most would be delayed until the 1982 construction season. The following chart displays the status of mainline pipe construction as of September 30, 1981:

Activity	Miles
Temporary Fencing	613
Clearing/Grading	611
Stringing Pipe	587
Trenching	583
Bending Pipe	569
Welding Pipe	539
Coating/Lowering Pipe	523
Hydrotest	430 /386

On December 5, 1981, the last mainline contractor ceased work for the winter. At that time, six of the nine major construction spreads, representing 77 percent of the mainline construction, was complete for the East Leg, as the status chart below indicates. Only 188 miles, nearly all in North Dakota, left to be installed in the 1982 season.

Activity	Miles
Temporary Fencing	639
Clearing/Grading	639
Stringing Pipe	635
Trenching	635
Bending Pipe	635
Welding Pipe	635
Coating/Lowering Pipe	635
Hydrotest	544
Cleanup	626 /387

The construction effort was a success the first year, as progress was very swift. There were, however, a few issues of concern, most importantly mainline pipe welding. /388

On May 27, 1981, as welding began on Spread 8 (southwestern Minnesota), crack-like defects began to appear under radiographic examination of the mainline pipe girth welds. /389 The cracks were unacceptable under DOT's regulations and, therefore, had to be cut out and replaced. On June 9, NBPL officials, discovering the problem through their QA/QC system, advised Schroeder of the problem and initiated procedures to remedy existing cracks and avoid future weld cracking. Schroeder, in turn, alerted Cook, who ordered a "special observation" of the sponsor's welding processes. Special observations were studies by small, ad hoc teams of expert technicians, convened by the OFI to troubleshoot issues for which staff required either assistance or a "second opinion."

The special observation team, led by Lloyd Ulrich, Transportation's AAO, and consisting of two pipeline engineering experts, studied the East Leg welding problem from June 16 to June 25, 1981. The group examined NBPL's policies and the procedures being followed by four spread contractors and subcontractors. No major deficiencies in the sponsor

policies or the contractor's procedures were discovered, although the team did suggest that a potential for radiograph misinterpretation existed. The group recommended that the sponsors be allowed to pursue their new remedial plan. OFI was advised to increase vigilance, which was imposed immediately by Schroeder. The summer passed, and the radiographic incidence of girth weld cracking, according to sponsor reports, appeared to subside.

On August 3, a Spread 8 hydrotest leak was traced to a cracked weld, one supposedly welded and screened after the revised procedures. This incident triggered a second review of sponsor QA/QC procedures. /390 OFI, in June, had deferred to NBPL's requests that they be permitted to rectify their welding problem internally. Now, the first construction season was nearly over, with about 600 miles of new pipeline in the ground, and there was no assurance that the cracking problem was solved. After discussing the issue, Schroeder and Cook, on August 26, 1981, officially requested a complete report on NBPL QA/QC activities and technical problems associated with weld cracking.

It appears, however, that NBPL officials were not prepared to issue such a report at this time, perhaps because they did not yet realize the full extent of the cracking problem themselves. NBPL Project Manager Carl D. Schulz, on September 2, instituted a reinterpretation of all of weld radiographs on Spread 8 and a random audit of Spreads 1, 2, 6, 7 and 9 by the company's inspectors. The results, compiled and circulated internally, indicated that some cracks had definitely been missed on Spreads 6, 7 and 8. Of 48,201 total field girth welds completed during the 1981 construction season, the sponsors found through their standard QA/QC system nearly 13,000 flaws, which constituted a 26.6 percent defect rate which the system was correcting. /391 The NBPL autumn audit, after rereading all weld radiographs, found an additional 234 flaws other than cracks, 346 transverse cracks (hairline cracks across the weld) and another 206 longitudinal cracks, for a total of 768 new defects, or an additional 1.6 percent rate. Although the rate was low, DOT regulations required that all 552 of the newly discovered cracks would have to cut out and replaced, necessitating the exhumation of pipe throughout the right-of-way. This was not a happy prospect.

The company, however, was not ready to share its reinterpretation findings with the OFI. On October 29, about two weeks after NBPL's internal welding study was complete and its results known, the company registered a formal, written objection to a finding of the first special observation that weld cracks could conceivably slip through the NBPL QA/QC system. Additionally, as Schroeder notes, "NB[PL] continued to request extension of response time on weld cracking letter [of August 26, 1981] through October and November, stating that legal implications were significant." /392 As Schroeder later explained to Rhett:

> While NB[PL] knew of the [seriousness of the welding] problem from the first week of October, they did not advise OFI until De-

cember 9. This was after much conversation on the overdue report, a response to SO#1 [the special observation] stating in effect that no problem existed, discovery of a weld being excavated on Spread 6 and two meetings with NB[PL] on allegations to OFI through anonymous telephone calls. /393

As Schroeder notes, Schulz finally outlined the welding audit results with him on December 9, 1981 - four days after the first construction season had closed. Schroeder, on December 21, asked for additional information in writing on NBPL's QA/QC system. This information was provided by Schulz in the form of a history nine days later, on December 30, 1984. On January 6, 1982, Schroeder briefed Rhett in Washington on the welding problem. Judgment on OFI's welding determinations, Rhett decided after the briefing, would best be reserved until more evidence was in.

OFI decided to hire an independent expert to accummulate this additional evidence. In January, shortly after the January 6 briefing, OFI engaged Daniel Polansky, a physicist with the Center for Radiation Research at the Commerce Department's National Bureau of Standards, to conduct a special observation of NBPL's overall radiographic, or nondestructive evaluation (NDE), system. /394 The review, known as "Special Observation 5," would examine the Northern Border system "from film quality to reader qualification to reader interpretation to second film review." /395 Polansky flew out to Omaha to begin his study on January 27, 1982. His field observations, discussed below, would end on February 4.

After assessing the time, effort and costs projected for replacing the cracked or otherwise flawed mainline pipe welds, Northern Border officials had little choice but to appeal for a waiver of 49 CFR 192.245, the regulation governing welding precedures. Standard procedure required the replacement of perhaps as many as 600 welds already buried, thus constituting a lengthy delay and prohibitive expense. On March 10, 1982, NBPL and its affiliates arranged a meeting with DOT and OFI principals, including Cook, Schroeder and Ulrich, to discuss their dilemma. /396

The waiver, at that meeting, was initially posed by Brian Jones, a NBPL researcher, who, along with J. Conrad Pyle, presented the company's case. DOT staff, from the department's Office of Pipeline Safety Regulation (OPSR) in the Research and Special Programs Administration, advised the pipeline company of the conditions under which it would be most favorably inclined to accept the waiver request. These conditions included a general limit on the size of defects which could be repaired instead of replaced, a detailed submission of how, in lieu of the standard procedure, NBPL's contractors intended to repair each type of defect anticipated, and QA/QC procedural adjustments to prevent the recurrence of such problems in the 1982 construction season. In effect, OFI and DOT wanted NBPL's controls to be closer the next time around.

NBPL officials, in late March press releases, announced their remedial welding program, but did not elaborate upon the welding crack problem which had necessitated it. /397 In fact, the program appeared to be posed as just another scheduled segment of the firm's regular QA/QC program, rather than as the special measure it actually constituted to correct a number of weld flaws. In one such release, Northern Plains President Hawks observed: "This program is another step in our process to provide assurances that this major new natural gas pipeline will operate in the safest and most efficient manner possible." /398

Many newspapers along the pipeline right-of-way did center their coverage upon the weld flaws, which numbered as high as 700 and which might have to be re-excavated. /399 John Jordison, NBPL's media and community relations director, admitted that there "could be some extensive dirt work involved," but assured listeners that farmers would receive full compensation for lost crops and new QA/QC procedure would dramatically reduce the incident of such defects in 1982.

On March 29, 1982, Polansky completed Special Observation 5 of NBPL's NDE system and submitted it to Schroeder. /400 All in all, the report was very positive, essentially vindicating NBPL, the OFI oversight approach and the agency's earlier decisions on the welding issue. Polansky found that "the basic qualifications of the [NBPL radiograph] interpreters varies from good to excellent" and that radiographic quality "met the requirements of the API standard." Additionally, "the overall quality of the welds in the pipeline is considered good; but it is also noted that...welds in spread 1 were markedly superior to those in spreads 6 and 8." /401 He also recommended that the quality of radiographic film be improved somewhat, but offered few other criticisms of the NBPL's system or performance.

In late March, as the Polansky report was received and NBPL prepared to begin its 1982 construction season, the company submitted its formal waiver petition to Melvin A. Judah, OPSR acting associate director in DOT's Research and Special Programs Administration. /402 Judah, in an April 2, 1982 letter to Pyle, acknowledged receipt of the NBPL petition, but advised the sponsors of certain "inadequacies in information" regarding the waiver request.

Judah, nevertheless, signed a notice of intent to grant the waiver on April 13, and it was published in the Federal Register on April 15. /403 Five days later on April 20, Pyle, in an eight-page letter to Judah, provided the additional information required for DOT to issue a final determination. /404 This letter, perhaps better than any other single document, characterizes the NBPL case for waiver. The NBPL argument may be summarized in three points:

° Environmental Impact. NBPL explained that "absent the [waiver] grant...Northern Border would have no choice but to utilize a cut out and replacement procedure" for the remedial work, which "neces-

sitates a 350-foot excavation" and requires the use of as many as eight pieces of heavy construction equipment. The waiver grant, in contrast would allow repair by grinding or re-welding, which requires only a 20-foot excavation and only three pieces of heavy equipment. "Obviously," NBPL maintained, "the use of repair procedures as requested in the waiver will result in the least impact on the environment." Furthermore, the firm noted, about 20 percent of the 550 cracked welds were located in environmentally sensitive areas, particularly susceptible to the disruptions associated with massive construction procedures.

° Cost Savings. NBPL estimated that weld replacement would cost about $30 million. Its proposed repair program, by contrast, would cut costs nearly in half, enabling a $12.5 million program savings. Since remedial weld expenses would most likely find their way into the ratebase, the NBPL repair program represented a substantial savings to consumers.

° Construction Schedule. "...[T]he replacement construction procedure is considerably more time consuming than utilization of the repair procedures," NBPL claimed. Standard replacement involved as much as seven days while repair could be accomplished in eight to 16 hours--less than a third of the time. NBPL concluded that, unless the waiver was granted, it could not keep its original timetable for construction completion. /405

Most of the affected states did not resist the weld waivers, although they were hardly enthusiastic about the circumstances under which they were imposed. Schroeder, in Omaha, surveyed the state public utility commissions on the issue for Cook and, generally, found resignation. /406 Few formal comments would be filed by the commissions. The Iowa State Commerce Commission, accepting NBPL's arguments, did endorse the waivers but also recognized "the false economy and potential danger to Iowans should the repair procedures proposed by Northern Border not produce welded pipeline joints of adequate strength and quality." /407

L.D. Santman, director of the Materials Transportation Bureau and Judah's boss in DOT's Research and Special Programs Administration, wrote Rhett on April 26, 1982, to request details on OFI's plans for monitoring the NBPL remedial welding program. /408 Rhett, on April 30, advised Santman that "a minimum of five engineers [attached to the OFI's Omaha office would be] dedicated full-time" to the program. /409 In addition, OFI would maintain a full complement of FIFRs and technical support personnel on NBPL's 1982 construction effort in North Dakota to ensure that the weld cracking problem would not reoccur.

Rhett was taking other actions, as well. He intended, for instance, to detail Irvine-based and Alaska-based OFI engineers to the East Leg as supplemental support. Ulrich, DOT's AAO to the Federal Inspector, would be assigned to work closely with Schroeder, Rhett explained, to "optimize

the flow of information back to DOT." FIFRs would be directed to make daily construction site visits and more thoroughly document their observation and review of NBPL's revised QA/QC program, which emphasized radiographic review. Finally, Rhett was planning a special observation of the remedial weld program "once construction is underway." /410

Santman, apparently, was satisfied with Rhett's plans. On May 5, 1982, with the NBPL 1982 construction effort already moving into full swing, he approved NBPL's petition of waiver from compliance with 49 CFR 192.245, thus allowing pipeline repair rather than weld replacement for many of the line's cracked welds. /411 NBPL's waiver, however, was governed by certain conditions. First, remedial welds had to be radiographically inspected "at least 24 hours after the repair has been completed" to help identify any delayed cracking. Second, the remedial weld procedure, approved for flawed welds buried during the 1981 season, could not be applied to flawed welds buried during current 1982 construction simply as a matter of course. Instead, the OFI would have to approve the procedure beforehand for each specific instance.

As the East Leg welding controversy, after 11 months, finally wound to a close, NBPL and OFI officials attempted to isolate the reasons for its occurance, some of which were listed in an OFI staff paper. /412 One might suggest a combination of contributing causes, which could be classified under either technical or quality control headings. The technical explanations were two-fold. First, NBPL was using heavy, thick-walled pipe, which created severe stress on the weld with even the slightest movement. Second, since the pipe is so rigid, a potentially damaging high shear stress may result when out-of-round pipe is forced into a round configuration by the lineup clamp.

Quality control lapses during welding apparently allowed cracks to initially go unnoticed, while the failure of radiographic interpreters to discover them resulted in the flaws being buried. In some instances, welders placing the initial bead on the joint progressed too rapidly and failed to place sufficient metal into the weld. "[B]ackwelders did not always follow correct procedures, thus creating the situation for the transverse [hairline] cracks to develop." /413 In addition, radiographers in some cases "were not experienced in identifying the very small defects being repaired. In a few instances," the paper continued, "there were simply miscalls which were not picked up by later checks." Even though the radiograph contained evidence of a flaw, such small defects were growing increasingly difficult for radiographic interpretation to detect. In large part, these lapses, and a few others, could be traced to inexperience and failure to follow procedures.

"It should be noted," the OFI staff paper concluded, "that the system involving NBPL QA/QC and the OFI did identify the problem and did continuously move toward resolution of it." OFI, of course, bore some responsibility for the system breakdown which allowed flawed welds to be buried. One might argue that OFI could have been somewhat more per-

sistent in its efforts to identify and resolve the issue when it first arose in June 1981. In the end, the flaws were detected and the welds were repaired - at a reduced cost due to the weld replacement waiver and within acceptable safety standards. And, above all, the project met its schedule. If the proof of the pudding is in the tasting, the NBPL system and OFI's recipe for oversight proved sufficient.

The welding controversy, unfortunately, overshadowed the very steady progress on the East Leg. Through the winter of 1981-82, NBPL and its contractors continued construction on its three major water crossings, all three meter stations and the first of two compressor stations. /414 Construction on the first water crossing, the Oahe Reservoir Crossing in southcentral North Dakota about 40 miles from Bismarck, had begun in May 1981, shortly after Judge Van Sickle dismissed the state PSC's legal challenge. Work on the remaining two crossings, on the Missouri River in North Dakota's northwest corner, and on the Little Missouri River about 60 miles southeast of the Missouri River, began the following August. Each crossing was composed of dual, parallel sections of 42-inch pipe, usually coated on site with 7.5 inches of concrete and laid across the river bed. Riedel International was selected by NBPL as execution contractor on all three crossings.

Progress on the Little Missouri crossing was the swiftest. By early January, the dual lines, each about 685-feet long, had been fabricated and installed in the river. The line was hydrotested shortly after, leaving only a few cleanup activities to carry over into the 1982 construction season. The two 1,700-foot pipeline sections for the Missouri River span were prepared for installation in mid-November, although trenching complications and inclement weather aborted the process on December 19, 1981. /415 The lines were pulled back out until spring 1982. There were no critical environmental or safety problems encountered on either site, although the line hydrotest on the Little Missouri crossing was conducted without warning signals or without restricting the area around the pipe.

Of the three crossings, the Oahe Reservoir presented the greatest challenge. /416 Operations on the reservoir began in mid-August and closed on December 16, 1981, without pipe being placed in the main river channel when a large ice flow developed. The mainline pipe, however, was wrapped, coated and welded together into 240-foot sections by October 7 for spring 1982 installation. The Oahe crossing constituted a 5,000-foot to 6,000-foot extension, depending upon reservoir water levels.

Earthwork began at Compressor Station No. 4, located in eastern North Dakota between the Little Missouri and Missouri rivers, on September 14, 1981 and continued until late October, when final site grading work was completed. The foundation was poured that Autumn, before a short winter construction hiatus. During this period, plans were being completed for Compressor Station No. 8, near the North Dakota-South

Dakota border. Construction there would begin after a Notice to Proceed, issued April 29, 1982, by the Federal Inspector, was granted.

Of all construction in 1981, it appears that Spread 5, a 93-mile stretch in southcentral North Dakota, was most consistently plagued by problems. The North Dakota suit, of course, initially delayed construction start. Furthermore, NBPL had been unable to purchase all of the pipeline right-of-way, so condemnation proceedings were necessary on several tracts. "Construction progressed for a distance of 31.7 miles during 1981," the East Leg construction history indicates, "and in that distance nine tracts totalling 4.2 miles had to be skipped" because of the proceedings. /417

The spread's welding record for 1981 was not good. Of about 2,076 welds, there were "244 cut-outs due to cracks, 23 cut-outs due to other reasons and 612 repairs for an overall reject rate of 42 [percent]." /418 The spread's mainline pipe spread contractor demonstrated the poorest safety record of all East Leg contractors during the first year. As the history reports:

> NBPL made a concerted effort to improve it [the contractor's safety performance]. They started at the preconstruction meeting where the [NBPL] Regional Safety Manager scolded [the contractor] for their poor record on Spread No. 6. There were three safety audits by Quality Assurance in the short period of time that the Spread was under construction. There were four lost-time accidents and one fatality. The fatality occurred on October 6, 1981...when an 800-foot section of pipe rolled off the skids and into the trench, crushing an x-ray technician. /419

NBPL was responsive to its welding and safety problems, and proper adjustments were made. Any construction project as large as the Northern Border pipeline was bound to experience some difficulties. The key to success was effective, efficient resolution of problems.

In early April 1982, the second mainline pipe construction season began, this time on the remaining three spreads in North Dakota. An unusually wet spring required road restrictions and muddied the right-of-way, but the timetable for autumn completion was being maintained. By spring, only cleanup remained on the Montana, South Dakota, Minnesota and Iowa spreads, while pipeline installation was required for the Missouri River and Oahe Reservoir crossings. Compressor Station No. 4, as noted above, was about 30 percent complete and Compressor Station No. 8 was scheduled to get underway on May 1, 1982. The three meter stations were all at early stages of construction.

By June 30, 1982, mainline pipeline construction was about 91 percent complete. The following chart indicates, as of that date, the number of miles of the total 823 miles completed since the beginning of the 1981 construction season:

Activity	Miles Complete	Miles Remaining
Temporary Fencing	817	6
Clearing/Grading	817	6
Stringing Pipe	798	25
Trenching	804	19
Bending Pipe	793	30
Welding Pipe	773	50
Coating/Lowering Pipe	749	74
Hydrotest	605	218
Cleanup	687	136 /420

The revised welding (QA/QC) procedures, applied by NBPL as a condition of the waivers and in order to avoid the 1981 cracking and radiography misinterpretations, appeared to be successful, according to the 12th OFI Quarterly Report. /421 "Revised pipe handling techniques, joint preparation procedures, welding process timing controls, and x-ray interpretation procedures," the report explained, "have been implemented in an effort to more closely control the welding process. By early May...the quality of construction indicated that the problems encountered during the 1981 season are being successfully [avoided]." The Remedial Weld Program, enabled by the DOT waivers in May, began late that month and remained on schedule for August completion, despite heavy rainfall in Iowa. Again, OFI judged that "the sponsor has maintained a high level of quality on the Remedial Weld Program." /422

Remaining sponsor activity had, in spring, shifted away from mainline pipe installation, which was nearly complete, to river crossings and facilities. Several variances, including those banning blasting and instream work, were granted to NBPL to facilitate Oahe Reservoir construction. Welding on the first crossing was completed on June 26, and excavation for the second began shortly after. Of the 6,000-foot crossing, about 4,200 feet traversed "mudflats," mostly on the east shore of the reservoir. /423 An Omaha contractor which specialized in such construction employed barges, floats and a yoke assembly to hold the pipe above the water until the final connecting welds were set. Both Missouri River crossings were complete by May 10, 1982, with connecting valve work remaining. A mass of earth slid about 15 feet on the Little Missouri River crossing, necessitating a rerouting of about one-half mile of the pipeline and complicating cleanup activities.

NBPL's contractor on Compressor Station No. 4, assailed by heavy rain, increased both the work week and the workforce to keep facility building on schedule. By June 30, the station was 80 percent complete. Construction began on Compressor Station No. 8 on May 26, about a month later than originally planned. Since this station was not necessary to transport gas through the Phase I prebuild, the delay would not stall the project. NPBL hoped to finish the station on November 1, 1982 - a date which would probably follow Phase I commissioning by FERC and the initial delivery of prebuild gas.

In summer 1982, as the sponsors drew closer to completion, fairly accurate cost projections became possible and preliminary project assessments became more common. A preliminary NBPL cost estimate, as of April 30, 1982, indicated that East Leg construction costs were running below the Project Control Estimate. /424 NBPL had, by this time, spent about $938.8 million. The firm forecasted a $1.191 billion final cost, which was about $47 million less than the preconstruction Control Estimate of $1.238 billion. The OFI, of course, had to assess the legitimacy of NBPL's expenditures for rate base inclusion before any precise figures could be established, but the firm's projections did provide evidence that NBPL was, as it had been claiming, running under budget.

The preliminary assessments of NBPL performance, mostly positive, arose from all quarters. In Glasgow, Montana, residents had awaited the arrival of 800 to 1,000 East Leg pipeline workers in summer 1981 with "apprehension and fear." /425 Such feelings soon dissolved. "We [town leaders] were amazed that we didn't have more problems," observed Glasgow Police Chief Tom Grewe. NPBL hired supplemental workers through local agencies, the firm and its employes deposited funds in local banks, pipeline workers and spouses led Sunday school classes and coached Little League teams. Local merchants, witnessing a 30 percent to 50 percent rise in sales, were elated. "...[S]ales have been mostly cash and I've yet to have a check come back written by a pipeliner," observed Mike Bryan, owner of the Federated, a Glasgow general merchandise store. Mrs. Neil Rogers, an Opheim woman who rented a home to a pipeline family, echoed the sentiments of many town residents in claiming she was "enriched in getting to know and make friends" with the pipeline people.

North Dakota state Sen. Bruce Bakewell, a Republican from Fortuna, praised the firm after a July inspection of the right-of-way with other members of the state House and Senate agriculture committees. /426 "You couldn't even see where it [the pipeline] was at [buried]," he told the Williston Daily Herald. The legislators visited a 65-mile stretch in Emmons County, about 65 miles south of Williston, which was one of the few North Dakota sections which underwent substantial construction during the 1981 season. The fields had been reclaimed with wheat, a "fast-growing protective cover," like rye and oats, which resisted initial erosion better than natural grasses. /427 After the tour, the lawmakers met in joint committee to summarize their findings. "The general feeling was that they're pretty well satisfied they [NBPL] were doing a good job," Bakewell concluded. Gas pipeliners and farmers, he claimed, could be good neighbors.

Not everyone, however, shared this view. In Garvin, Minnesota, Jim Vandendriessche, a successful young farmer and community leader, enlisted his father, Paul, and two other Lyon County farmers to challenge the pipeline project, mostly on payment equity grounds, in district court. /428 Vandendriessche objected to NBPL's method of paying flat easement grants on a county rate basis. For instance, Lyon County landowners were given a $1,095 per easement acre, regardless of the land's value and

despite the fact that neighboring Murray County residents received $1,500 an acre. Vandendriessche's protest won him a larger grant from NBPL, but his own county government balked at the $50 annual tax credit per acre he proposed to compensate landowners for "the inconvenience of the construction and for living with...the danger of having the line on their property." /429 The line would bring an estimated $120,000 in increased tax revenue to Lyon County, Vandendriessche claimed, and farmers on the line, who sacrificed and may later suffer because of it, should be alloted a percentage of this return. Local government officials, no doubt intent on distributing the new wealth among all citizens, did not concur.

Spread 5, in southern North Dakota, continued to suffer a disproportionate share of troubles. QC management on the spread "was found to be lacking almost from the start of the 1982 construction season," the OFI East Leg History reports:

> By early to mid-June both OFI and the [NBPL] QA organization were encountering an almost belligerent lack of cooperation on compliance issues which were developing. This attitude was also affecting the general QC inspection staff, so that by late June, it was apparent that changes had to occur. [After a series of meetings and observations] the decision was made by Northern Border to make several personnel changes. On June 28, these changes were announced. The QC inspection staff on Spread No. 5 improved immediately and remained an excellent staff for the remainder of the 1982 construction season. /430

The history indicates that "NBPL QC achieved only fair contractor response to correcting safety-related items identified by" OFI, although unlike the previous year, no major accidents occurred on the spread. Spread 5, from July 20 to August 8, was the final spread to be hydrostatically tested. Testing had been completed on Spread 3 by July 30 and on Spread 4 by August 4, 1982.

Late summer activity was almost exclusively dedicated to completing the water crossings and constructing compressor and metering facilities. The Missouri River tie-in of the river crossing pipe and the mainline pipe was accomplished by July 28, 1982, leaving only cleanup work to be completed. A day later, the Oahe Reservoir tie-in on the second line was made. Blasting and instream work depleted the fish population in the reservoir, but an ambitious NBPL program replenished the supply. Cleanup and restoration, following the tie-in, was quite extensive.

Compressor Station No. 4, 80 percent complete by June 30, was in the midst of pressure testing on July 9, 1982, when a "potentially tragic incident" occurred: a heavy wall 42-inch steel tee, located on the station discharge line, ruptured and exploded. /431 "The area had not been cleared of workers, warning signs were not posted and the area was not cordoned off," according to an OFI report of the incident. Fortunately,

no one was killed, although two laborers, working within 60 feet of the tee, were slightly injured by flying debris and the high-pressure water jet. The contractor was censured for a lack of safety precaution and, after tee replacement, subsequent tests were more carefully administered and controlled. Station startup and commissioning exercises occurred for nine days, from August 17 to August 26, under the auspices of Northern Plains Natural Gas personnel, who would operate the facility. Nine systems, from mainline gas to instrumentation, were formally and methodically examined. Overall system pressure testing concluded on August 31, 1982. Compressor Station No. 8, since summer, was progressing smoothly, although it would not be ready for post-construction testing until mid-November 1982.

Lastly, the Remedial Weld Program, established in response to the cracking and radiographic problems of 1981 and governed by the waiver agreement, was judged "fully successful" by OFI. /432 Dale K. Johnson, an OFI FIFR and perhaps Schroeder's most experienced and knowledgeable field engineer, assumed supervision for the program, which commmenced April 26, 1982 and closed on July 26, 1984 - five days ahead of schedule. Johnson, in a short narrative review, offered a few comments on the program, which included:

- New topsoil handling methods reduced subsoil mixing in stockpiling and backfilling.
- NBPL right-of-way agents attached to QC staffs "greatly improves landowner-sponsor relations" through prompt recognition and resolution of complaints.
- Mainline pipe taping practices, after exhumation and weld examination, appeared successful.
- Program oversight by government requires experienced, well-trained FIFRs, with sufficient backup technical expertise.
- "Sponsor personnel with project level authority in the field enhances OFI informal enforcement, reduces response for obtaining contractor corrections and cuts re-work, standby, delay and claim costs."
- FIFR contacts with other state and federal agencies facilitate cooperation and avoid misunderstandings. /433

Johnson's report could be considered one of a series of "After Action" reports, more deliberative and evaluative than earlier spead histories, ordered by Schroeder in a variety of substantive issue areas as final construction and testing concluded. These reports, produced in late 1982 and early 1983, provided a wealth of analysis and recommendations. The three major reports, apart from an assessment of the Remedial Weld Program, addressed the NBPL overall environmental program, federal-state cooperation and enforcement, and oversight of compressor station construction.

The environmental program assessment, conducted by Dean D. Loomis, Schroeder's environmental coordinator in Omaha, found the NBPL program

to be "well designed and, generally well executed":

> The overall environmental impacts of construction of the EL were minimal for a project of this size. Localized effects at most stream crossings, wetlands, and through the badlands were confined to turbidity and sendimentation in the immediate vicinity.... Much of the credit for minimizing the environmental impacts should go to the NBPL environmental program which while not perfect did instill and maintain a reasonable degree of environmental awareness [in the sponsors' QC inspectors]. /434

Loomis did note, however, that "a decrease in...environmental concerns was developing during the second season of construction, probably due to [pressure] to get the pipeline completed on schedule." NBPL's primary environmental monitoring technique, the Sensitive Environmental Area List [SEAL] approach, which focuses attention on critical locations, worked acceptably, Loomis maintained, but suffered from an insufficient developmental timetable. He also advised that FIFRs be hired at least two months before construction to familiarize themselves with sponsor plans and the right-of-way area.

The second major "After Action" report, an assessment of federal-state cooperation and enforcement, was written by John Morton, another of Schroeder's FIFRs, who had limited but varied experience with the intergovernmental relations topic. /435 Morton, at the Williston Construction Office, worked jointly with two federal agency FIFRs, one from Interior's Bureau of Land Management (BLM) and another from Agriculture's Forest Service (FS), both under formal Interagency Agreements (IAGs) which divided OFI's monitoring responsibilities. Additionally, he worked regularly with field personnel from one state agency, under IAG, and a second, without.

Morton found, predictably, both advantages and disadvantages in such shared responsibility with other field representatives. /436 The drawbacks were fourfold. First, other representatives, working under IAGs, were often unfamiliar with OFI's compliance policies and procedures. Though this was somewhat understandable given delays in compliance manual preparation, the resultant lack of understanding fostered compliance inconsistency and tended to confuse the sponsors and the contractors.

Second, the two federal agency FIFRs lacked general knowledge of pipeline construction and the codes, regulations and sponsor plans which were relevant to the East Leg prebuild. In other words, they lacked sufficient perspective with which to frame compliance decisions. Third, non-OFI field representatives could become "bogged down with their own agency's reporting and contact system," inhibiting the swift response required by project management and imperative to Rhett's field philosophy. Finally, OFI FIFRs were occasionally forced to act as arbitors between BLM and FS field representatives and the sponsors, which

tended to steal valuable time from compliance duties.

Despite these difficulties, Morton seemed to emphasize the advantages. First, BLM and FS personnel, locally based, were already quite familiar with the geography, community, life styles and politics of the area. They shared this knowledge with the OFI FIFRs, who were essentially new to the pipeline route. Second, other agency personnel were experts on the departmental and agency regulations which OFI was authorized to enforce along the East Leg. In a sense, OFI was provided with technical consultants on substantive compliance responsibilities. Third, BLM and FS field staff reduced the imperative for additional OFI FIFRs, as oversight responsibilities were divided through IAGs or informal understandings.

Finally, and perhaps most importantly, cooperative working relations with BLM and FS field staff promoted good will among the OFI and other federal agencies and "placed the agencies in a decision-making role as a partner with OFI rather than [as a] sideline critic." /437 Rhett, again, was able, through Schroeder and his Omaha staff, to persuade other agencies to bring their staff into partnership with OFI in the field compliance process.

The field partnership, although limited to small sections, was genuine, Morton maintains, usually even in the absence of IAGs, and it tended to blend OFI's strengths of broad project vision, expedition and coordination with the other federal agencies' substantive expertise, local association and enforcement vigor. Naturally, occasional tensions arose, but they generally represented a balance of expertise and authority in decision. The blend encouraged reconciliation between OFI's often competing goals of facilitation and enforcement, between expedition and regulation.

Morton, however, did appear to suggest constraint in the formal delegation of OFI authority to other agency FIFRs. /438 BLM and FS field representatives, for instance, "seriously considered" issuing emergency stop work orders inappropriately on two occasions, in situations which the environment, public health or safety was neither immediately or irreversibly threatened. He preferred that OFI retain this authority. He also recommended that IAGs involve only very general language, which would allow the flexibity to adjust to individual personalities and situations.

Morton was also the author of the Compressor Station Construction "After Action" report, which generally recommended a reduced oversight role in subsequent undertakings:

> At a [compressor station], OFI involvement during the early phases should be primarily a periodic site visit to check on progress, check site conditions, review QC daily reports and on occasion review specific aspects of the ongoing work of specific com-

pliance. Periodic observations, about once every week through the bulk of construction, [are] frequent enough. /439

The need for station environmental surveillance, Morton maintained, was minimal for a conventional pipeline project, although it might be greater in Alaska. He believed that sponsor start-up and commissioning procedures should be detailed and available to OFI officials several months ahead of time, to ensure their integrity, and that sponsor material deliveries be verified periodically by OFI audits.

Other "After Action" reports were produced on the effects of pipeline construction on praire falcon nesting; on small stream crossings; on topsoil handling methods; on cathodic protection; and on drain tile preservation and restoration. Few critical sponsor deficiencies were identified in any of these areas, although the OFI FIFRs who authored the reports generally offered recommendations for avoiding potential problems in the future.

Canadian East Leg activity, at this time, also neared completion. /440 The primary contractor for Foothills Pipe Lines (Yukon) Ltd., the Canadian project sponsor, installed the final 128 miles of 42-inch pipe along the Canadian East Leg section in southern Alberta by August 1982. About 267 miles of pipe had been installed during the 1981 construction season. Foothills was also building four compressor stations and a meter station along the route. The cost of the Canadian line and related facilities was about $800 million. On August 30, 1982, Mitchell Sharp, Commissioner of Canada's Northern Pipeline Agency (NPA), advised Rhett that Canadian Phase I facilities were operational. Earlier, the segment had been granted "Leave to Open" by the NEB, which acknowledged construction completion for Canadian regulatory purposes. /441

NBPL, shifting from its construction to an operating phase in August, remained on schedule. In accordance with a completion and commissioning plan approved by the OFI, NBPL and its affiliates operated and confirmed each mechanical device and system along the route. The final tie-in weld was completed on August 18, and the U.S. East Leg line was packed with Canadian gas, drawn from Foothills systems at Port of Morgan, for final pressure and geometric testing. Afterward, cleaning "pigs," as they are known in the industry, were driven through the system to remove any debris or water, left from the hydrotests. /442

By September 18, 1982, after additional testing, NBPL had completed its commissioning schedule. Two days later, on September 20, Rhett wrote William A. Henry, president of Northern Plains Natural Gas Co., NBPL's managing partner, that the East Leg "is completed so as to be capable of performing at the certificated throughput of 800 MMcf/d." /443 With this letter, he granted certification, thus culminating over 18 months of NBPL construction, allowing the sponsors to bill for charges under tariffs approved earlier by the FERC and clearing way for gas delivery. The East Leg Prebuild, apart from minor modifications and supplemental

construction, was complete.

On October 4, 1982, East Leg dignitaries, many of them present when ground was broken in May 1981 in South Dakota, gathered in Glen Ulin, near Bismarck, North Dakota, to celebrate the line's completion with a two-day ceremony. /444 The official valve turning was conducted that day by Energy Secretary Edwards, who shared the distinction of keynote speaker with Canadian Mitchell Sharp, while Vice President George Bush looked on. An electronic map, which illustrated the East Leg prebuild's 823-mile route from Alberta across the Great Plains into Iowa, was unveiled for the crowd. On October 5, a special dinner was held in which FERC Commissioner Anthony Sousa and Canada's NEB Chairman Geoffrey Edge offered remarks.

As the principal U.S. government and private sector managers, Rhett and Henry, of course, were also on hand. Henry appeared elated. "Northern Border Pipe Line and the Federal Inspector, Jack Rhett, had an excellent relationship and outstanding cooperation throughout the project," Henry told Dean Hale, editor of the Oil and Gas Journal. "Because Northern Plains Natural Gas was able to work with OFI and use the 'one window' process in dealing with other Federal agencies, completion was possible in timely fashion and below budget." /445 The project, Henry added, cost about $100 million less than the nearly $1.5 billion budgeted for construction on both sides of the border. NBPL's costs, as of July 31, 1982, had risen to $1.052 billion, but the company revised its April completion cost forecast to $1.175 billion, even further below the $1.238 billion Project Control Estimate. /446

Henry, in a later article he wrote on the East Leg prebuild, focused on the "unique challenges" that NBPL encountered:

> [T]he regulatory process, the procurement of materials, the commitments to the environment, the logistics of nine construction spreads, all of these and many more were [extremely] challenging to those involved in the Northern Border project. /447

Again, he echoed earlier statements about relations with OFI:

> I feel that the OFI's field presence and oversight of the project from Washington can stand as a hallmark of cooperation between the government and private industry. Our people and the people under Federal Inspector Jack Rhett were able to have a full and open relationship which contributed to the overall success of the project. The "one-window" approach, as far as interaction with federal agencies, clearly contributed to a no-delay posture. /448

By mid-autumn, the East Leg prebuild volumes began to climb toward 800 MMcf/d, the volume required for full billing of the shippers. OFI's Omaha staff was occupied with drafting East Leg histories, "After Action" reports and monitoring initial sponsor operations. Two problems did

appear in October and November 1982, but they were quickly resolved. /449 First, excess water content persisted in East Leg gas deliveries, indicating that the September pigging operations had not been as successful as earlier believed. Additional pigging reduced the water content by December. The second problem involved pipe stress at Compressor Station No. 4, where the line had settled and rotated a scrubber vessel. It appears that soil supporting the line had not been properly compacted. concrete supports and piers were poured and the system's alignment was reset.

NBPL, in late autumn, produced its third estimate of costs, as of October 31, 1982. /450 The company had spent $1.109 billion, while reducing its forecasted final cost even further to $1.146 billion - about $82 million below the $1.238 billion Project Control Estimate. In early spring, NBPL announced its final cost estimate of $1.131 billion. /451 This figure, of course, was $107 million, or 9 percent, less than the Project Control Estimate.

East Leg throughput, in early 1983, began to decline. The daily average fell to 643 MMcf/d, a decline from the 800 MMcf/d full billing trigger and about 66 percent of the total volumes available under existing export contracts. /452 Snow and frigid weather halted restoration activities early in winter, but tree, vegetation and native grass planting commenced in spring. NBPL's aerial seeding program was judged a complete success, setting a new standard for restoration in large, remote areas. Erosion problems were brought under control in various badlands areas. Rhett, in early spring, announced that he would close his Omaha Field Office on April 29, 1983, as his oversight responsibilities had largely concluded and subsequent monitoring could be assumed by BLM, the Forest Service and other federal offices.

The final East Leg prebuild chapter, at least as far as pipeline construction was concerned, would close in late September 1983, when Cook and Schroeder, by then an official with Interior's Bureau of Reclamation in Bismarck, conducted a final aerial inspection of the Northern Border right-of-way. /453 The pair, joined by Conrad Pyle and two Northern Plains district managers, flew over the pipeline route from central North Dakota to northern Montana on September 29, 1983, before inclement weather prevented aerial surveillance of southern sections. The following day, Cook and Schroeder were briefed on final restorative progress. "It is our judgment," Cook advised Rhett, "that Northern Plains, operator of the Eastern Leg, has or is complying satisfactorily with the Federal requirements relating to the condition of the right-of-way." /454 From an engineering and construction standpoint, the Northern Border prebuild pipeline had been brought to a successful conclusion.

The East Leg experience, however, was not yet history. First, volume on the East Leg prebuild quickly became a major concern. During a period in November and December 1982, NBPL had hit and maintained for

30 successive days the 800 MMcf/d throughput level necessary to trigger the switch from minimum billing to full billing of operating costs for consortium shippers. Regardless of needed volumes, NBPL's revised agreement specified that shippers had to take at least 40 percent their originally contracted gas. Many shippers claimed that they could not afford so much gas, simply refused contracted volumes and, consequently, drove up the unit cost of system gas for those still participating. These unit costs rose rapidly - often to three time the prevailing rates - making it even more difficult for those still abiding by the contracts to purchase their share.

Volumes in 1983 plummeted. In the second quarter of 1983, the system delivered only about 22 billion cubic feet of Canadian gas to American consumers - about 241 MMcf/d and only 25 percent of the 975 MMcf/d approved capacity of the revised contract. /455 By autumn, throughput dropped even further to 204 MMcf/d, or 21 percent capacity. /456

NBPL officials, with a $1 billion project to finance, were understandably uneasy. The rapid decrease in volumes and continued defection of shippers left NBPL's ability to pay its bills subject to some doubt. Henry, in NBPL press releases, attributed the decreased demand for the company's gas to increased domestic market competition, stable oil prices and somewhat higher costs for Canadian gas. "Northern Border is actively seeking methods to ease its costs and therefore, make natural gas more competitive and the pipeline more efficient," he assured customers and shareholders alike. /457 East Leg gas volumes, by late 1983, would finally increase slightly after the Canadian government reduced its export price schedule. /458 An additional border price reduction in 1984 increased Canadian gas competitiveness, and the Canadian government appeared ready to further alter its energy policies in favor of increased trade. NBPL's gas volume picture, in the mid-1980s, would be brighter, but the pipeline's ultimate fate was still not entirely certain.

Reduced volumes may have been NBPL's most troublesome and critical concern, but its engineering consultancy became the most controversial. In March 1983, as grass grew over the East Leg right-of-way, an Iowa citizens group, later allied with the state commerce commission, charged NBPL with improper management and excessive billing. /459 The charge arose from NBPL's hiring of the Northern Engineering International Company (NEICo) to provide exclusive engineering counsel on the East Leg prebuild and to the high profits which NEICo was accruing. NEICo, like Northern Plains Natural Gas Co., NBPL's sponsoring partner, was a wholly-owned subsidiary of InterNorth, the large Midwestern energy development corporation.

The citizens' group, Iowa Citizens for Community Improvement (ICCI), accused NBPL of "the practice of spinning off new corporate subsidiaries for the purpose of charging consulting fees and bonuses in addition to what otherwise would be recorded as costs to the [partnership]...and [of

fraudulent, abusive mismanagement," a ICCI representative asserted. /460 NEICo, the group maintained, realized $16.2 million after-tax profit in 1981, its first year, by performing services identical to those provided in 1980 by Northern Plains, which was reimbursed only at cost. NBPL and InterNorth, they claimed, formed NEICo in order to realize additional profits allowed under lucrative incentive guidelines. NEICo, by this analysis, was merely a corporate mechanism to increase NBPL's profits.

NBPL, however, was not ICCI's only target. Berman, in a tentative rate base determination on December 3, 1982, had judged the NBPL-NEICo arrangement as acceptable, hence the NEICo profits as legitimate for consumer billings. /461 The OFI, by ICCI's reckoning, was deficient in its regulatory responsibility to strike imprudent costs from the project rate base.

The NEICo issue could be traced to April 30, 1981, when NBPL first entered a project management contract, retroactively effective to January 1, 1981, with the Northern Engineering International Company. /462 NEICo was incorporated on April 6, 1981, a wholly owned subsidiary of InterNorth. /463 In effect, the contract made NEICo responsible for East Leg prebuild design, engineering and project management, subject to the approval and general supervision of the NBPL partnership. A 60-page contract was drafted and signed. /464 It provided full reimbursement for wages and salaries and created lucrative incentive provisions for superior cost performance.

NEICo, InterNorth and Northern Plains did comprise an "interlocking directorate" at the top, as FIGURE 3-15 illustrates. /465 All eight top NEICo officials held key positions with InterNorth, the parent company, with Northern Plains, a fellow corporate sibling, or even, as in the case of Rocco LoChiano, both. LoChiano, the first president of NEICo's board of directors, was also a Northern Plains board member and the senior vice president and chief technical officer for InterNorth. NEICo and Northern Plains shared facilities with InterNorth and employes of both subsidiary groups could participate in InterNorth's stock option plan. Before the NEICo arrangement, neither InterNorth nor Northern Plains charged a fee - profit - for any services rendered to the NBPL partnership.

InterNorth's engineering division (ultimately NEICo) was apparently engaged by the consortium in 1979 after a previous engineering contract, with a firm unassociated with any of the consortium members, was not renewed. InterNorth, which developed the cost estimates used in the FERC filings, was paid on a cost-reimbursement basis, although no formal contract was set with NBPL. As construction approached, InterNorth proposed that its engineering division be retained, under contract, to perform all engineering and project management services during East Leg construction. The consortium, after assessing InterNorth's capabilities and proposed fees, accepted the firm's proposal and engaged the engine-

FIGURE 3-15: NEICo Interlocking Directorate

	NEICo[1]	Northern Plains[2]	InterNorth[3]
°°	LoChiano President Board of Directors	LoChiano Board of Directors	LoChiano Senior V.P., Chief Executive Technical Officer
°°	Mierhenry V.P. Treasurer Board of Directors	Mierhenry V.P. Treasurer	Mierhenry V.P. Treasurer
°°	Sawtell V.P. Secretary	Sawtell V.P. Secretary	Sawtell V.P. Secretary
°°	Hepperman Asst. Treasurer	Hepperman Asst. Treasurer	Hepperman Asst. Tresurer
°°	Wood Asst. Secretary	Wood Asst. Secretary	Wood Asst. Secretary
°°	Wallace Board of Directors	Wallace Board of Directors	Wallace V.P. General Counsel
°°	Thompson Board of Directors	Thompson Board of Directors	Thompson Senior V.P., Chief Financial Officer

1 Northern Engineering International Co.
2 Northern Plains Natural Gas Company
3 InterNorth, Inc.

ering division, subseqently renamed and reorganized as NEICo, an InterNorth subsidiary.

It is questionable whether the consortium could have selected another management firm so close to the start of construction and still maintained its schedule. In any event, the approval was in conformance with the partnership agreement which allowed Northern Plains, as operator, to contract with affiliates provided that such contracts were on terms "materially no less favorable to the partnership than those prevailing at the time for comparable services of unaffiliated independent parties."

Main Hurdman, engaged by OFI in summer 1981 to conduct a continuous audit of sponsor expenses for rate base inclusion, was asked to examine the NEICo arrangement. The firm, after profiling NEICo's history, management structure and contract with NBPL, wrote "it is our opinion that the transactions with NEICo should be considered related party transactions," and thus be subject to rigorous audit. /466 The sponsors had maintained that NBPL and NEICo were independent companies and that the engineering contract was competitively issued.

A related party, as defined by the American Institute of Certified Public Accountants, suggests that "one party has the ability to significantly influence the management or operating policies of the other, to the extent that one of the transacting parties might be prevented from fully pursuing its own separate interests." Such "relatedness," Main Hurdman believed, could be construed from the interlocking directorates, shared working quarters and other associations among the three InterNorth companies and NBPL.

FERC regulations, Main Hurdman staff noted in a draft report, did not specifically address the allowability of profits paid to associated companies, but the FERC "Audit Program for Natural Gas Companies," prepared by the Office of the Chief [FERC] Accountant, did pose, in its instructions, what was generally known as the "no-profit-to-affiliates" rule. /467 The instructions state that, generally speaking, "a profit should not be generated [by any company] when dealing directly with itself and that such transactions are not only improper from a regulatory standpoint, but also from the standpoint of generally accepted accounting principles." Such profits "do not represent proper or valid costs but instead represent 'write-ups' and, as such, should not be included in utility plant or operating expense account."

Profits, the draft added, "should not be confused with an allowance of a reasonable return on any related investment." The instructions further stipulate:

> In certain instances, a regulated utility is permitted to include in its account amounts charged by associated or subsidiary companies in excess of direct costs when such amounts are deemed to provide

these related parties with amounts to compensate them for overhead cost and a reasonable return on the use of assets employed to perform related services. /468

OFI faced several decisions on the NBPL-NEICo relationship. First, it had to decide if NBPL, its Northern Plains lead partner, and NEICo were to be considered related parties, thus necessitating the audit of NEICo expenditures. Furthermore, a judgment on the applicability of the "no-profit-to-affiliates" rule was required.

On March 31, 1982, Berman instructed John Templeton, an assistant office director and his most experienced auditor, to examine the NEICo-NBPL issue. Specifically, he asked Templeton compare the NEICo contract compensation terms with those of "unrelated parties" involved in the project, such as Fluor or Williams Brothers Engineering Company (WBEC). /469 In mid-April, Templeton reported that in terms of guarantees and compensation, the three contracts were generally similar. /470 For instance, NEICo home office markups were 106%, compared to Fluor's 110% and WBEC's 113%. NEICo's profit range varied from 7.5% to 22.5%, while the Fluor range was between 15% and 16.5% and the WBEC range from 12.75% to 15%. However, the NEICo markup on contracts was considerably higher and represented a difference of as much as $12.5 million over Fluor and WBEC arrangements.

OFI did decided to bring a "related party" judgment on the NEICo contract and therefore audit its charges. On May 13, 1982, Rhett, upon counsel from Berman, advised W. A. Henry, the Northern Plains president and NBPL official, that OFI judged "NBPL and NEICo to be related parties [thus] requiring closer audit scrutiny, and [raising] questions...regarding the allocation of costs and certain other aspects of the contract." /471 Another issue, Rhett added, "which is my major concern, is the reasonableness of the incentive fee provision under the contract; further discussions are needed between our respective management personnel on this matter." This, essentially, put NBPL on notice that OFI would carefully assess all NEICo-NBPL cost transactions.

NBPL, its partners and NEICo officials objected to any suggestion that NEICo's creation constituted a "sweetheart" deal to unduely increase InterNorth profits. R.F. McNamara, a NEICo vice president, wrote Joseph W. Takacs, a Main Hurdman official assigned to the OFI contract, to dispute Rhett's judgment, which was largely based on Main Hurdman counsel. /472 McNamara maintained, in part, that NEICo and NBPL were not, in fact, "related parties," due to management committee structure and procedures, and that the contract had been negotiated under competitive terms. Regarding compensation, "it was, and continues to be, our feeling that the market, not internal costs, is the primary basis upon which negotiations between owner and contractor take place," McNamara explained. In other words, NEICo developed its compensation schedule in relation to other prevailing market rates, not on the basis of actual cost of service. If, as McNamara claimed, NEICo and NBPL were not

"related," it should be considered proper for NEICo to negotiate a contract as favorable as possible in terms of compensation.

McNamara also insisted that NEICo was not, in the FERC sense, "controlled" by InterNorth or Northern Plains, the NBPL managing partner. Northern Plains, after all, owned only 22.75% of NBPL, a share exceeded by Trans-Canada and equaled by Panhandle Eastern. /473 Finally, McNamara argued that FERC's certificate issuance in April 1980, particularly its acceptance of IROR rates, constituted a formal approval of any cost overlays at 135 percent, thus precluding even the need for a rate base audit analysis on the subject. /474

By late summer, Berman was beginning to congeal an opinion on the NEICo-NBPL issue. /475 His judgments were based, in large part, on Main Hurdman analyses, which examined the control issue, and on discussions with OFI's legal counsel, who appeared to suggest that the "no-profits" rule did not apply to the NEICo case unless NBPL and NEICo could be found to be under common control.

Main Hurdman, in a draft third report on the NEICo-NBPL prepard in August 1982, noted that Northern Plains fractional share (22.75%) of NBPL did not in itself preclude "control" or necessarily imply, as McNamara suggested, NEICo-NBPL independence. /476 The firm's staff cited several other factors which bore directly the question of whether control, in terms of "significant influence," did exist:

- The contract was not awarded in a competitive environment, despite NEICo's protestations to the contrary.
- The chairman of NBPL's management committee, who led negotiations resulting in the NEICo contract, was president and a board director of Northern Plains.
- One NBPL partner found rates in the third party billing clause of the NEICo contract to be excessive.
- "Prior to April 1981, InterNorth/Northern Plains personnel had significant cost data concerning recently awarded pipe and pipeline execution contracts...[which] showed that, barring unforeseen circumstance, significant incentive fee would be earned" and could be accrued by NEICo. /477

Evidence did exist, the draft report indicated, for judging NEICo a "controlled" party despite the structure of NBPL management committee because of InterNorth's ability to influence the selection of NEICo. Furthermore, even if "control" did not exist, there was justification for judging many of NEICo's charges as unreasonable. This justification was carefully elaborated by Main Hurdman staff in the draft report:

- Billings for overheads and other reimbursable costs exceeded actual costs by $8.872 million - or about 33 percent - for a 15-month period ending March 31, 1982. This occurred despite the fact that NEICo, in an April 14, 1982, memo to the OFI, claimed that 98 percent of the overhead was not profit, but "reimbursement

for services...." Additionally, the contract's stated intention was to "cover the costs of" overhead, not generate a management fee.

- "With the exception of fixed overhead rates, the NEICo contract is a cost plus incentive fee type. The fixed overhead rates generate billings significantly in excess of related costs. Such contracts are commonly referred to as 'low risk' and are generally awarded with relatively low rates of return on cost. The NEICo contract intent as stated [however] is to reimburse all costs with a 15 to 22.5% profit factor."
- A large amount of "excess overhead billings and the substantial profits earned related to overlays and fees" on third party billings. "Ascribing significant amounts of overhead and fees to third party billings is not common...in negotiating contract terms. Including such amounts and reimbursables in revenues is not recommended for calculating return on revenue. Approximately 48% of all NEICo costs are for third party billings and 36% are for reimbursable costs. An available industry study showed an average in this area of 12% and 5% respectively. Third party billings already contain overhead and fees."
- "Court precedence in this area questioned the useability of market value comparisions due to their speculative nature. Cost of service analyses were preferred. [NBPL] managment contends only market value is appropriate to measure profits in the NEICo contract and that the market value comparisons confirm the reasonableness of such profit." /478

Berman assessed this evidence carefully, but his determination had to involve more than an auditor's assessment. The NEICo phenomena, that of engineering firms being created by parent corporations to secure specific expertise and reduce costs, was becoming quite popular. Sound business principles, both in terms of accounting and management, encouraged it. The phenomena enabled parent corporations to custom engineering services, cut project costs, and increase profits through management fees. Such corporate arrangements required extra regulatory attention, given the "no-profit-to-affiliates" rule and the potential for rate base padding, but Berman concluded that they had to be considered legitimate corporate arrangements.

In dealing with the legal issues involved, Berman asked Rhodell Fields, OFI's legal counsel, for a formal analysis of the "no-profit-to-affiliates" rule. /479 This analysis, which supported Berman's judgment, clarified the legal precedence issues and, in association with Berman's review of the facts, served as a primary basis for the tentative decision. /480 Fields found Florida Gas Transmission Co. v. Federal Power Commission, 362 F2d 331 (1966), to be the guiding case. "On review," he wrote, "the [Appeals] court identified the rationale underpinning the no profits rule (362 F.2d at 335-336):

If the relationship between two contracting parties is so close

> that they lose their individual indentity and are in fact one, there can be no "actual legitimate cost" involved in the payment of profits, since it would be tantamount to a company's paying itself a profit for interdepartmental services. /481

The court, Fields continued, recognized that "the arrangement between the parties may not have met 'the strictest standards required by "arm's length bargaining",' but the court did not believe that it caused the parties to lose their individual identities such as to make them one." The court held that "[m]ere influence arising out of business relationships where control is not present is not a proper standard" for the application of the "no-profits-for-affiliates" rule. (Emphasis added.)

> This case [NEICo] is analogous to Florida Gas Transmission Co., supra, where the parties were admittedly related, and the possibility existed that the relationship between the parties may have had some effect on whether the contract was executed. But as the court said, "Mere influence arising out of business relationships where control is not present" is not enough.... Rather than exclude all profit because of the relationship between the parties, the decisionmaker [in this case, OFI] has to determine whether the claimed profit is reasonable. /482

Fields' analysis, then, suggested that the "no-profit" rule was not applicable, that NEICo, in fact was not "controlled" by NBPL, although clear relatedness did exist. Since Northern Plains, as managing partner, held only 22.75% ownership of NBPL - an amount less than Trans-Canada (30%), equal to Panhandle Eastern (22.75%) and less than a fourth of all stock - "control" was not clearly manifest. Hence, by Fields' reckoning, OFI's rate base regulatory energies would be best directed to deciding the reasonableness of profit, not the principle of its legitimacy.

Later in his memo, the OFI attorney noted that the court had not established a test to determine reasonableness, but did offer some guidance: "With respect to fees paid to related companies which are not controlled by one or the other, the court in fact gave implicit endorsement to the application of a market test analysis. To the extent that the costs are actual and legitimate," he wrote, "there should be no impediment to allowing the regulated company to recover them." /483 In Public Service Company of New Mexico Opinion No. 133, a FERC administrative law judge's determination that reasonableness could be determined "by comparison to the prices of [services and commodities] available from non-affiliated suppliers" was upheld by the commission. /484 In another case, Cities of Altus v. FERC No. 77-1548 (October 23, 1978), a federal appeals court ruled against petitioners who argued that a subsidiary had charged a related company excessive rates. The court found that "the price paid by [the related company] to its subsidiary was somewhat lower than it would have had to pay non-affiliated suppliers. Thus, allegations of excessive return is not relevant where the price

paid to an affiliate is comparable to market prices." /485

Fields concluded his analysis as follows:

> Consequently, an analysis of the most recent Commission and court cases support the application of a market test to determine the reasonableness of NEICo's charges to Northern Border [NBPL]. Though NEICo is related to Northern Border (through InterNorth and Northern Plains) one does not control the other. Moreover, as long as the price paid to NEICo by Northern Border is reasonable when compared with alternative prices, it is irrelevant that NEICo's costs may be less than comparable firms [due to savings realized through its relatedness]. /486

Berman adopted the Fields interpretation of legal opinion: Withhold a "no-profits" judgment; allow the market, rather than actual costs, to determine fees; and examine any sponsor rate base submissions very carefully, since related firms were involved. Fields' analysis was consistent with Berman's own judgments, based upon the circumstances of NEICo's creation, Northern Plains' limited formal influence in NBPL management, the emerging NEICo phenomena and his sense of Commission ruling dispositions at the top. NEICo, as a company related to but, by Berman's determination, uncontrolled by NBPL, had a right to its market-test fees, both by law and by current practice. OFI's job would be to ensure that the fees accrued by NEICo from the partnership were reasonable and legitimate.

The stage, finally, was set for Berman, who on December 3, 1982, issued his tentative rate base determination affirming NBPL's NEICo arrangement for the East Leg. /487 Berman, as earlier indications had suggested, ruled in favor of NBPL. Of about $1.020 billion in submitted costs for 15 months ending March 31, 1981, Berman approved $1,018,820,000, and disallowed only about $1.2 million for public relations, entertainment, promotions and lobbying activities and for "improperly accrued vacation benefits."

The determination primarily presented Berman's justification for the ruling on NEICo project management costs. "Based on the Main Hurdman audit, OFI staff analyses, including an analysis by OFI's Deputy General Counsel of the most recent Commission and court cases bearing on these issues...I have tentatively determined that Northern Border Pipeline Company and NEICo are not affiliated (associated) companies, i.e., a 'control' situation does not exist." /488 Additionally, because Berman found "the price paid (excluding incentive fees) to NEICo reasonable under the market analysis, I have not based my tentative determination on NEICo's costs and profit" but on market competitiveness in relation to other contracts.

> [I]n my opinion, the results [of a comparative contract analysis] show that the payments to NEICo under these specific facts and

circumstances (exclusive of incentive fee) are generally comparable with the range of payments that could be reasonably expected using Fluor and Williams Brothers and, thus, are considered reasonable under this market test. /489

Berman then turned to the incentive fee.

I believe the use of an incentive fee arrangement in this type of contract is appropriate, as long as a legitimate basis exists for "earning" the incentive fee. Further, I do not wish to detract from any efforts put forth by NEICo to save costs. On balance, however, I conclude that the incentive fee provision in the NEICo contract, as written, is unreasonably generous in light of the risks inherent in the work at the time the contract was negotiated. In order to correct for this situation and, at the same time, stay as close as possible to the apparent intent of the incentive fee provision, my tentative determination is that, for rate base purposes only, no incentive fee should be allowed to accumulate under the contract unless and until actual project costs underrun the inflation-adjusted Final Design Cost Estimate by $70 million. /490

Berman's $70 million threshold, however, posed little obstacle to NBPL. Apparently, it had been overcome prospectively, if the NBPL cost estimate, as of October 31, 1982 and issued in late Autumn, was accurate. That estimate projected NBPL costs, as noted above, at $1.146 billion, some $82 million below the $1.238 billion Project Control Estimate and comfortably above the $70 million threshold.

Berman's tentative determination was good news for Northern Plains and InterNorth. Although Robert A. Hill, NBPL's attorney, would ask Rhett to reinstate the $1.2 million in public relations, lobbying and other expenses which Berman had expelled, he and his colleagues had to be relieved that the central NBPL cost base, including the $42.2 million in NEICo billings, had been preserved. /491

NEICo's success, however, was not celebrated by all. Joseph R. Hampton, president of the Nebraska League of Municipalities, expressed fears to FERC chairman C.M. Butler III "that no [public and open] investigation regarding the reasonableness of NBPL's interpretations and applications will be made." /492 In a letter, cosigned by two state senators, Hampton argued that greater intervenor participation was necessary before a final and authoritative determination on the "no-profit-to-affiliates" rule could be issued.

We feel there are sufficient facts in the record to warrant a more detailed investigation regarding the awarding of the contract and the reasonableness of profit and bonuses. We urge the Federal Inspector, on his own accord pursuant to [standard administrative procedures], to initiate further investigation and hearings on these issues. /493

The most adamant opposition to the tentative decision, however, would come from the Iowa State Commerce Commission (ISCC), in a March 11, 1983, letter written by Diane L. McIntire, commission counsel. /494 While ISCC, "[f]or the most part, [has] no reason to disagree with the tentative determination,

> ...the ISCC submits that it would be unreasonable, on the basis of the facts disclosed in that determination and its attachments, to include in rate base any profits of Northern Engineering International Company (NEICo), a wholly-owned affiliate of InterNorth providing project management services. /495

McIntire, in a five-page legal analysis, questioned Fields' contention that NEICo was not "controlled" by NBPL, through Northern Plains. "There is," she stated, "no flat 100% ownership test in relevant precedent." Indeed, in St. Croix Falls Minnesota Improvement Company et al., 3 FPC 13 (1942), the commission had ruled that "control" could exist through the medium of ownership considerably less than a majority share. McIntire also suggested that in the Florida case, cited by Fields and applied by Berman in his determination, "no substantial contention [was made] that the transactions in question were consummated under conditions of collusion, fraud, gross neglect or undue influence" - a situation which she charged was "strikingly different" than the NEICo instance, where she suggested such conditions may have existed. /496

McIntire believed that NEICo's claim of "reasonable profits" was defeated by the very fact that "no good reason for its existence appears. The situation," she continued, "is hardly comparable to cases involving purchases, where the alternative to buying from one's affiliate is buying from someone else." /497 She found the Fields and Berman citation of the St. Croix case and Louisville Hydro-Electric Company, 1 FPC 130, case, as ironic, since the court ruled in both instances that "no profit was allowed" for "services such as those provided by NEICo." She concluded:

> Even if the contract with NEICo was prudently incurred - a fact that by no means appears on the record - this does not mean all its profit should be allowed. The 'backbilled' profit clearly runs contrary to normal business practice, smacks of self-dealing and should be disallowed. Further, the reasonableness of NEICo's profit should not be determined through a comparison of alternative prices, because there are no alternative prices. The tentative determination strove mightily to construct some, but the assumptions made determine the outcome. The fact is, there is no way of determining what others would have charged to provide services to this unique project because no bids were taken. The company's failure to follow prudent, cost-minimizing procedures should not now operate to its benefit. Even in the much less egregrious Florida [case], the court acknowledged that the company had the burden of proof with respect to reasonableness. If the evidence is ambiguous, the company - not the ratepayers - should pay the price. /498

McIntire's interpretation of the NEICo situation, of previous FERC rulings and court opinions, had no more validity than OFI judgments. (Berman said he had considered the same facts before making his tentative determination.) Only a federal court could choose the compelling argument, although under the ANGTA provisions, it was unlikely that such showdown would ever occur. The ISCC's position, nevertheless, was not entirely void of merit, as Berman and Fields would concede. After all, some of McIntire's points has been argued by both Main Hurdman and OFI staff. Furthermore, the ISCC was just doing its job - challenging a rate base decision which might adversely effect Iowa gas consumers. Fields admitted he might make a similar appeal in McIntire's place, if perhaps restructuring his argument somewhat differently.

NBPL's Hill, as one might suspect, was not impressed by McIntire's arguments. "The ISCC position is nothing other than a disagreement with established law and rate making principles," he wrote Rhett on March 24, 1983. /499

> The ISCC challenges the reasonableness of NEICo's profits by raising the specter of improper influence. Improper influence and "control" are not issues here, and the ISCC cannot resurrect them by selected quotations of agreeable portions of case law. The tortuous interpretation of Florida...by the ISCC is an attempt to side-step the existing law and avoid a confrontation with the solid facts which is the critical, if not sole, inquiry into the reasonableness of NEICo contract.... /500

Hill proceeded, once again, to cite his interpretation of Florida, which was consistent with Berman's ruling in the tentative decision: "[U]nder the analysis of Florida, Northern Border and NEICo did not lose their separate identities or become one by virtue of the relationship between them or between InterNorth and NEICo. Northern Border and NEICo are '..."clearly identifiable" and independent entit[ies], pursuing [their] individual business objectives at all times,'" he insisted. In sum, according to NBPL:

> The ISCC comment has failed to present evidence either as to control or undue influence or as to the terms of the NEICo contract being out-of-line with comparable contracts in other projects. The comment of the ISCC merely raises once again the issues which have been examined in exhaustive detail.... /501

Rep. Berkley Bedell (D-Iowa), no doubt in response to appeals from the emergent Iowa Citizens for Community Improvement (ICCI) group, advised Rhett on May 31, 1983, that he believed "the close relationship between NEICo and InterNorth cast considerable doubt on the independence of NEICo and...substantially undermines the case for recognition of full profits on its operations. I urge," he continued, "that the final determination on rate base reflect the fact that the case has not been made for recognition of profit on NEICo's operation." /502 Rhett, responding

about a week later, assured Bedell "that your views, as well as the views of your constituents...will receive full consideration by this office" in the OFI's final determination. /503

On September 7, 1983, Rhett signed and issued his "Final Determination for Approving in Part and Disallowing in Part Expenditures Claimed for Inclusion in Rate Base by Northern Border Pipeline Company." /504 Essentially, he affirmed Berman's tentative determination, designating $1,018,096,654 for rate base approval. (This figure was $723,346 less than Berman's determination, as Rhett temporarily disallowed $318,346 on the NBPL Remedial Welding Program, until pending litigation was settled, and another $405,000 which was associated with Phase II construction.)

More specifically, Rhett affirmed Berman's judgment on the NEICo project management costs. After briefly summarizing Berman's findings, the Federal Inspector wrote:

> I have thoroughly reviewed the record on this matter and concur that NBPL and NEICo are not affiliated companies; that NEICo's profit should be judged on the basis of a market test; that the tests employed by the Director were adequate; and that payments under the contract, including incentive fees earned in accordance with the Director's suggested $70 million underrun threshold, should be considered reasonable. /505

Rhett did note that on March 18, 1983, NBPL advised OFI and the FERC that its actual project costs would likely underrun the inflation-adjusted Final Design Cost Estimate by about $275 million - some $205 million over Berman's $70 million threshold - which would enable full NEICo incentive fee approval.

The Federal Inspector, in his final determination, explicitly addressed the Iowa State Commerce Commission comments. Although he found "the facts cited by ISCC are correct, they are the same facts that [Berman] considered in the Tentative Determination" before discounting the "no-profit-to-affiliates" rule. The ISCC, in other words, failed to shed new light on the issue. Furthermore, the Iowa commission, Rhett stated, "totally discounts the precedential value of Florida..., which established a rather straightforward test to determine the appropriateness" of rule application. /506 That rule, he said, following Fields and Berman, indicated:

> If the relationship between two contracting parties is so close that they lose their individual identity and are in fact one, there can be no "actual legitimate cost" involved in the payment of profits, since it would be tantamount to a company's paying itself a profit for interdepartmental services.

This, according to Rhett, was the governing principle. NEICo and NBPL, he concluded, were not "one" entity, therefore the engineering

firm was entitled to legitimate fees, based upon prevailing market values and regulated by incentive clauses.

Predictably, the ISCC differed with Rhett's decision. About two weeks after the final determination, on September 22, 1983, McIntire applied for a rehearing, in accord with OFI's policies and procedures for rate base audit and approval. A rehearing was justified, the ISCC claimed, according to the Administrative Procedures Act, since "no record evidence demonstrate[s] the need for the NEICo contract or the reasonableness" of profits and given the "failure to provide interested parties the ability to investigate and present their cases on disputed material facts." /507 Rhett, however, disagreed. On October 21, 1983, he denied the hearing request: "I have concluded that nothing contained [in the ISCC hearing appeal] warrants any change or modification of the Final Determination." /508

By this time, of course, the Iowa Citizens for Community Improvement (ICCI) were mobilized and resolved, through the ISCC, to challenge the OFI ruling in court. On November 9, 1983, McIntire and the ISCC asked the U.S. Court of Appeals for the District of Columbia Circuit to review OFI's final determination and Rhett's denial of a rehearing. /509 McIntire, in her petition for review, argued that OFI's actions should be judged pursuant to Section 19 of the Natural Gas Act (15 U.S.C. §717r and 28 U.S.C. §2344) rather than Section 10 of the ANGTA (15 U.S.C §719h), as OFI would certainly claim. ANGTA Section 10 limited judicial review of agency orders to only basic constitutional issues or to instances where OFI acted "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." /510 The Natural Gas Act, by contrast, allowed a much greater range and rationale for review.

NBPL, an intervenor in the case, advised the court on November 17 that it, along with OFI, believed ISCC's appeal should be governed by ANGTA Section 10. The court, five days later, ordered the parties "to show cause why this case should or should not be considered and decided pursuant to" ANGTA, by November 29, 1983. /511 On that date, the ISCC, OFI and NBPL all filed arguments. The OFI, represented by Fields, now acting general counsel, filed two other documents: a motion for the establishment of an expedited procedural schedule, in accord with ANGTA, and a certificate of record in lieu of record.

The U.S. Appeals Court, only five days later, issued an order granting OFI's motion to expedite and requiring the ISCC to file its initial brief by December 20, 1983. This preliminary action foreshadowed a court disposition that ANGTA did in fact apply, although the issue was to be considered in the case briefs. ISCC, on December 9, moved for a reconsideration of the court order on grounds that expedition unduely burdened ISCC counsel and lacked any real justification. Since the court, on December 22, denied ISCC's pleas in all respects, its brief was submitted, as ordered, on December 30, 1983.

ISCC's argument, which focused on administrative procedures, was essentially two-fold. /512 First, the commission claimed that Section 10 of the ANGTA did not apply as it was intended to govern only those matters affecting "the expeditious construction and operation of ANGTS," not procedures of ratemaking, which in this case took place afterward. Furthermore, since ANGTA did not explicitly preempt those statutes which dictate such ratemaking activity, the ISCC asserted that they should apply in the NBPL case. Second, ISCC charged that OFI procedures denied its statutory right, under the Natural Gas Act, to an adjudicative hearing. In standard ratemaking cases, the court had ruled that "notice and comment procedures," the extent of OFI review in the NBPL instance, are statutorily insufficient and "some sort of adversary, adjudicative-type procedures are necessary." /513

> All the ISCC asked from the OFI, and all it seeks to have mandated by this Court, is a forum in which to pursue the issues we see in Northern Border's claimed rate base. /514

The ISCC, later in the brief, raised two other procedural issues which more specifically addressed OFI's judgment on the NEICo profits, and which would be largely ignored by the court if it could not agree with the commission on the two issues cited above:

- Whether OFI's decision on NEICo profits should be reversed "due to its failure to be supported by substantial evidence in the record."
- Whether OFI's decision on NEICo profits should be reversed "due to the failure to enter necessary findings and conclusions and to either follow or explain its departure from precedent." /515

The case was argued before a three-judge panel of the U.S. Court of Appeals on January 25, 1984. The panel, deciding that ANGTA Section 10 did apply, issued its judgment only seven days later, on February 1, 1984.

> Because we find that our review of the OFI orders is governed by Section 10 of the Alaska Natural Gas Transportation Act (ANGTA), 15 U.S.C. §717h (1982), the scope of that review is severely limited: We may only consider whether the OFI orders denied ISCC's constitutional rights, or were "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." 15 U.S.C. §719h(b)(2) (1982). Under this standard of review, we affirm the OFI orders. /516

The court's written opinion was not published until several months later, on April 6, 1984. It ruled, with regard to the ISCC's first claim of ANGTA inapplicability, that ANGTA was intended to govern all central matters associated with the ANGTS, including ratemaking issues. Further, explicit preemption of prior authorities was not required for the law to apply. The court also held that "Section 10 of ANGTA pre-

cludes us from substantively reviewing the Final Determination and Denial of Rehearing for reasonableness or substantial evidentiary support." /517

This, in effect, catagorically dismissed ISCC's second charge, that it was denied the right to a hearing and, also, precluded any further substantive examination of the OFI's NEICo decision or the legitimacy of the NEICO arrangement. The court, in essence, ruled that since OFI had followed procedures as governed by the ANGTA, its decision could not be appealed, regardless of the substantive merits of the NEICo case.

The court's decision was not unanimous. Dissenting Circuit Court Judge Abner J. Mikva, a former Democratic congressman from Illinois, argued with ISCC that ANGTA did not eclipse traditional judicial review provisions for rate base determinations. /518 "Without any evidence of congressional intent," he wrote, "today's majority takes a position which eviscerates any meaningful review of agency rate base determination - determinations which...will have dramatic and long-term effects on the rates paid by consumers." /519

The Appeals Court ruling officially closed the NEICo controversy, but the episode left a mark on the OFI. The determination's active and sustained opposition from Iowa consumers was something that troubled many OFI officials. It was not easy, despite the reasonableness of the OFI determinations, to ignore press and public intimations that the OFI failed to guard the rate payer's interest as rigorously as it should have. Nevertheless, staff did accept the official judgment that NEICo represented "a proper way to do business, under the law and according to prevailing business practice." /520 If the "no-profit" rule did not apply, as OFI had decided, the agency could not legitimately deprive NEICo of its profits, even if they may have appeared excessive to some observers.

Not all OFI officials, however, were distressed by the outcome. After all, it could also be argued that NEICo, despite its high profits, provided engineering services for less than an unaffiliated corporation might have, through economies of scale. NEICo, in its joint effort with InterNorth and Northern Plains, did manage to trim certain costs and avoid engineering snafus, which could have complicated or delayed project construction. It must also be noted that the other NBPL partners, unrelated to NEICo or Northern Plains, agreed to the NEICo arrangement - an action they would have been loathe to take had it involved enriching InterNorth at their own expense.

East Leg experience would prove extremely valuable to OFI in several ways. First, the agency tested a variety of organization and field oversight arrangements for possible use in Alaska. These included AAO placements in OFI line and staff positions, a mix of inhouse and contract technical support, and several agreements with other federal agencies for surveillance or special expertise. Second, OFI was afforded an

opportunity to help identify and resolve sponsor design and construction problems (welding of large-diameter pipe, QA/QC, small stream crossing) in a conventional project setting before dealing with the more complex Arctic application. Third, OFI's cost officials were able to implement, administer and study the IROR and to set precedents for a variety of regulatory matters, including rate base auditing and inclusion, which would be critical in Alaska. Finally, the experience proved ANGTA's effectiveness in avoiding protracted legal entanglements in two different instances.

The East Leg, completed on schedule and within budget, could hardly be considered anything but a success, particularly in this era of energy mega-project failures. But, as Rhett would occasionally observe, it would have probably found success anyhow, if perhaps at some diminished level, without the OFI around to marshall federal oversight. OFI's real value would be discovered in Alaska, where the lessons of the Lower Leg experiences would be put to the test.

Inertia and the TAGS Challenge

The ANGTA waivers had become law on December 15, 1981 and Alaska Northwest, the Alaska Leg partnership managed by McMillian's NWA, hoped to follow NBPL's initial East Leg construction success with an acceptable financing plan for their segment. In early 1982, project leaders were optimistic. McMillian's banking group, led by Bank of America's H. Anton Tucher, believed that "by the end of the year" a loan agreement for $27 billion would be arranged with NWA. /521 The group, which had first encouraged the waivers, returned to major lendors after waiver passage to rebuild a financial package. On March 18, the banking group presented a preliminary report of its findings to the consortium's financial board in Denver and plans were made for a presentation to the Alaska Northwest partnership, later in Salt Lake City.

At the consortium finance board meeting, early optimism disappeared. The "numbers," missing before the waivers, still did not add up, the bankers explained. They certified that Alaska Northwest was good for the $8 billion it wished to contribute and that the producers could be counted on for $9 billion more. /522 But the banks, under NWA's non-recourse financing, could not attract any more than about $3 to $5 billion. This left a $5 billion to $7 billion financing gap for the $27 billion Alaska Leg, a gap which had to be filled either by the oil companies or by the State of Alaska. The financing impasse, apparently, had not been broken by the waivers.

Alaskan state lawmakers, resisting previous pleas to help finance the project, once again considered its investment opportunities. The state's chief financial advisor, Kidder, Peabody and Co., the New York investment firm, advised Alaskan officials that spring to pledge up to $3 billion if they wished the project to be built. /523 Both Stevens and Murkowski endorsed the firm's recommendation. /524 ANGTS "is a good investment for Alaska," Stevens remarked, noting that the investment should return at least $5 billion. "The pipeline," he added, "is the key to full development of Prudhoe Bay gas." But caution ruled the day. Rep. Dick Randolph, a libertarian from Fairbanks, reminded colleagues that $3 billion was enough to pay 300,000 Alaskans - or nearly three-quarters of the state's population - $10,000 outright. /525 Furthermore, how, he wondered, "are we going to sell Alaska's gas at over $30 [per Mcf]... when there are 12 trillion cubic feet of gas in Alberta for the U.S. market that is shut in because it can't be sold at $4.50 [per Mcf]." Rep. Rick Halford (R-Chugiak), the State House majority leader, would eventually ask for more information from its financial advisor rather than action from his chamber.

Project observers, by mid-April, began to sense an inevitable slip. Bogdan Kipling, an energy reporter for the Vancouver Sun, reported ANGTS was "on death row," due to financing difficulties. /526 Michael Carey, a guest columnist for the Anchorage Daily News, used the same analogy:

> Obituaries usually contain a full measure of charity, but it is impossible to write charitably about the death of the Alaska natural gas pipeline, which died last week after a lengthy illness. The gas line had been terminally ill for some time, but proponents did not want to admit it. Now they do not want to bury the remains. /527

On April 29, 1982, Alaska Northwest executives and oil company representatives, frustrated by rising interest rates, gas deregulation and the sustained oil glut, met in Salt Lake City in yet another attempt to forge an agreeable financing plan for the project, now estimated at $43 bilion. /528 Consortium officials, shortly after the waivers, had promised OFI and FERC regulators that their new financing plan would be set by July 1, 1982, but that deadline was hopeless. "It doesn't look good for an early start," one banker observed at the session. /529 "The talks are at a crisis point," a U.S. Senate staffer remarked. "Unless a compromise is worked out quickly, the entire project will be indefinitely delayed." "This would be a major undertaking in the best of times," noted Kenneth Seplow, the Kidder Peabody vice president who advised the Alaska legislature, "and the fundamental economic conditions we have experienced in the past few months have made it not the best of times." /530

The partnership meeting lasted six hours. The oil companies refused to close the $5-$7 billion financing gap, which would have raised their share as high as $16 billion. "We were ready to go ahead," McMillian told Fortune Magazine, "but the oil producers said it wasn't time for them." /531 Observers attributed producer reticence to several causes. First, the madding market situation, with prospect of cheap, extended domestic and Canadian sources, discouraged risky Arctic investment. Second, Exxon, suffering several investment disappointments and facing reduced profits, hesitated to enter into the ANGTS adventure in a bigger way. Third, the producers' inability to secure sufficient management controls from McMillian and NWA may have contributed to financing failure, although some claim the oil companies were happy for McMillian to handle the project.

Finally, the producers wanted the sponsors and Alaska to buy a larger stake. /532 Alaska Northwest, they claimed, should provide $14 billion, which would make the financing package complete. The State of Alaska, they added, should contribute $3 billion, considering the return substantial returns the state would receive with construction, operation and royalties. Both entities, however, balked. NWA insisted that $8 billion was all the partnership could muster and the Alaska state legislature repeatedly refused to become financially involved.

As officials emerged, a Northwest Energy Company spokesman told the press that "[i]t's on hold for two years." /533 The ANGTS, previously scheduled for November 1987 completion, had been slipped two years to winter 1989. "The project participants are working diligently to explore

all reasonable means of furthering the financial planning for the project," a NWA statement explained. "Without exception the participants believe strongly that the system should be built" as soon as soft energy markets hardened and tight financial markets loosened up.

Rhett, since early 1982, had been expecting the Alaska Leg suspension. Throughout the initial years of the project, he was genuinely optimistic about its prospects, as his statements to the Congress acknowledge. Even during the waiver package hearings in autumn 1981, he sincerely believed that passage could still trigger a financing agreement. His first suspicions of a substantial project delay came on June 17, 1981, before the waivers, when NWA announced its first slip of the target date from winter 1985-86 to winter 1986-87. From that time until waiver passage, and despite sponsor and banker confidence, he recognized a producer and Alaskan reluctance to fill the Alaska Leg financing gap. When financing failed to materialize by the end of January 1982, immediately upon waiver passage, he suspected that the producers were simply not ready to build.

On May 5, 1982, a week after the Salt Lake City meeting, Charles Behlke, Alaska's Gas Pipeline Coordinator, told the Fairbanks Chamber of Commerce that he was "very pessimistic" about the project's short range chances. /534 "John McMillian is a very, very sharp guy," he observed. "He has risen from the ashes before and may do so again.... But the project is on indefinite hold and if I were betting, I would bet this group [NWA] will not put it [sufficient financing] together."

"The cold, hard fact is," he continued, "that from the start the sponsors didn't have the money. I think that was overlooked by the federal government," which, through Rhett's statements and official pronouncements, created an atmosphere of false hope. "What they [various federal actors, including the OFI] gave Northwest was a hunting license for money," not any real hope or guarantee of finding it. If the Alaska Leg was economically viable, he told his audience, "the people at Prudhoe Bay [producers] would do it."

As to Canadian reaction, Behlke said "I have a feeling the Canadians are crying on the outside and laughing on the inside" at the Phase II stall. At times during the 1970s, Canada, fearing its domestic gas reserves were being too quickly depleted, hoped to cut its Alberta exports. However, as the Alberta gas bubble continued to grow and recently, as international markets tightened, export expansion was encouraged. Today, Canadian energy producers, now serviced with the ANGTS prebuild, are probably delighted not to be competing with Alaskan gas, Behlke maintained.

Producers, with a new express route to American markets, may have been delighted, but Canadian nationalists were not. As David Milne, a Christian Science Monitor correspondent, reported on May 5, 1982:

> Charges of "sellout to the US" are once again being heard in Canada as the Liberal Party government is battered by the political fallout from the postponement of [ANGTS,] a huge, joint Canada-US energy project. /535

Prime Minister Trudeau, caught in the political pinch "between... nationalistic energy sentiments and the desire to encourage big construction projects that would give Canada's flagging economy a welcome boost," had bet on the Phase I prebuild only, as it was appearing, to lose his larger wager on ANGTS. Trudeau's left wing opponents, particularly those from the New Democratic Party (NDP), were particularly critical. "We are left with one-quarter of the job completed," complained Ian Waddell, a NDP member of Parliament and energy spokesman. "Does [Energy Minister Marc] Lelonde still have the naivete or the gall to stand up in the House of Commons and say this project can still be financed in the immediate future?" /536

Trudeau's prestige suffered a second serious blow on the same day, April 30, when a consortium of U.S. and Canadian oil firms announced it would abandon the $11.2 billion Alsands project, a four-year-old program to extract synthetic crude from oilsand deposits in northern Alberta. The Alsands scuttling, alone, would cost billions of dollars in industrial development and thousands of new jobs. Alsands, predictably, brought additional criticism from the right, the opposition Conservative Party, whose policies were much more concilitory toward the energy industry and more attractive to foreign investment.

"Mr. Trudeau set about with a vengeance to press 'Canadianization' of Canada's industry," wrote the Wall Street Journal, "on the apparent assumption that playing on Canada's nationalisic sentiments offered him his best chance to unify the" nation.

> But the Canadian unity Mr. Trudeau has achieved has been more apparent than real and may even become less real if economic troubles continue to mount. Mr. Trudeau has indeed discouraged foreign investment in Canada, largely by making foreign interests (mainly U.S.) a shooting gallery for Canadian takeovers.... [Consequently, p]rivate foreign capital, once the source of much of Canada's development, has been encouraged to stay home [or return home from Canadian energy development adventures]. /537

Trudeau, by his words and deeds, obviously wanted ANGTS Phase II to be built, as it would facilitate the eventual development of Canadian gas in the Mackenzie Delta and the Arctic Islands. But he had reason, as well, to celebrate the Phase I prebuild alone. He may have sensed, well before 1982, that the Alaska Leg might be postponed, but he was apparently prepared, with this delay and possible abandonment, to suffer the criticism of energy nationalists to accommodate western energy interests and, hopefully, to help revive the sluggish Canadian economy.

Alaska Northwest, for its part, did not tarry in signaling the practical consequences of its April 29 decision to slip the project. On May 8, only nine days after the slip was announced, Northwest Alaskan Pipeline Company, the consortium's managing partner, cut its project payroll, including contract personnel, from 806 to 186. /538 In Fairbanks, 96 of 123 ANGTS-related jobs were eliminated. The NWA closed its Anchorage office altogether. Contractors were hit the hardest: Fluor dismissed all but seven of 191 Irvine employes assigned to the ANGTS contract and Ralph M. Parsons, engaged to design the conditioning plant, trimmed its Pasadena-based ANGTS staff from 200 to 20. /539

The NWA cutbacks, of course, carried serious implications for Foothills, the Canadian partner, and both U.S. and Canadian governmental oversight agencies. Foothills, a participant in the Salt Lake City talks on April 29, trimmed back its personnel accordingly. Rhett quickly established a reduction-in-force strategy, which would cut OFI personnel from 135 to 95 by September 30, 1982. /540 He also revised his 1982 and 1983 budgets, from $27.4 million to $19.4 million in FY 1982 and from $24.3 million to only $7.1 million in FY 1983. In the meantime, Canada's Northern Pipeline Agency prepared plans to decrease its staff of 104 employes by about 20 percent by the end of September. /541

ANGTS, apart from the two-year slip, suffered a pair of other setbacks that spring. American Natural Resources System (ANR), one of the Alaska Northwest partners, advised the NWA that it "would not make further equity investments" in the venture. /542 "Our requirements for Alaskan gas have been very substantially reduced," explained James Trebilcott, an ANR executive vice president, "and our participation in the Great Plains coal gasification project has placed significant capital demands on our system." Since ANR had contributed only $27.8 million in equity, the lowest among the Alaska Northwest firms, its departure did not represent a major defection or a substantial revenue loss. But, as one energy publication noted, it may have constituted the first "sign ...of the [Alaska Northwest consortium] unravelling." /543

The ANR defection was compounded on May 19 by an NWA request that FERC delay consideration of several outstanding technical issues, relating primarily to gas marketability and net economic benefit of the project. /544 "We recommend the scheduling of technical conferences should await finalization of gas sales contracts and additional filings by the parties," NWA attorney Rush Moody advised FERC Administrative Law Judge Jon G. Lotis. "It is too difficult to say when or what schedule we should be on." Moody did ask the FERC to proceed with two other regulatory concerns: a shipper tracking "proceeding to determine the current costs of all transportation charges, and the final approval of cost estimates provided by" NWA. In late May, Judge Lotis ruled in favor of the NWA motions, thus delaying these regulatory decisions. /545

These developments may have strained the Alaska Northwest alliance, but they would not break it. Mitchell Sharp, the Canadian NPA chairman, told reporters in late May that some consortium members might quit, but other prospective firms, such as Standard Oil of California (San Francisco) and Tennaco (Houston), appeared interested in joining. /546 Alaska Northwest's composition might alter, he said, but it would not dissolve. After all, by summer 1982, the consortium had invested about $600 million for Alaska Leg planning and development - more than half of what it would cost to actually construct the 823-mile East Leg prebuild. /547 The controlling partner, McMillian's Northwest Energy Company, had contributed $60 million of this total. In addition, the Prudhoe Bay producers had provided an extra $175 million. Even in an era of unprecedented energy megaprojects, a $775 million venture would not be abandoned casually.

NWA, furthermore, did have, as Moody's FERC appeal indicated, a variety of regulatory, design and other preconstruction activities to attend before breaking ground in Alaska. /548 Even if Phase II was slipped 10 years, these matters had to be accomplished and would keep a small core of project staff occupied. For the remainder of 1982, NWA prepared a rather ambitious agenda. First, it intended to obtain FERC approval of the Alaska Leg Certification Cost Estimate and, from OFI's "one window," gain permits for temporary construction camps and airfields. Past expenditures had to be prepared and submitted to OFI for rate base review and inclusion, and FERC would soon issue its "shipper tracking" rules. Finally, the frost heave mitigation problem remained unsolved. NWA continued its research at the Fairbanks Frost Heave Test Site to complete the relevant section of the Design Criteria Manual, which would be subject to OFI approval.

While NWA, during this financing hiatus, counseled patience and fidelity to ANGTS, project skeptics raised the call for a new look at alternatives to the trans-Canada pipeline. As early as May 6, an Alaska state task force, led by state Natural Resources Commissioner John Katz and created initially to consider state investment in the ANGTS, recommended study of a distribution gas pipeline, which would service state gas consumers and fuel a new petrochemical industry. /549

A state senate panel, led by Sen. Mike Colletta (R-Anchorage), a young candidate for lieutenant governor, passed a resolution only a week later which urged Gov. Jay Hammond to examine both the distribution line idea and a trans-Alaskan transmission line to the gulf, modeled after the old El Paso project. /550 Leaders in Japan, Korea and Taiwan, he said, should be approached about an all-Alaska gas pipeline which would provide liquefied natural gas to Pacific communities. /551 "These Pacific Rim markets are now the world's fastest growing for liquefied natural gas and petrochemicals," he wrote Hammond. "A long-term supply of these resources [such as that which the Prudhoe Bay gas fields could provide] would be of great interest to these countries."

The Fairbanks Daily News-Miner, in a subsequent editorial, observed that "[g]loomy news over possible construction of the natural gas pipeline doesn't have to stay that way.

> In the wake of Northwest's [NWA's two-year slip] announcement, legislators who talked of moving on to look at alternatives had the right idea. Our state should be the catalyst in getting such a project going - we should start now to look at what could be done and how the state could work to move it along....
>
> We've had enough delays on the question of what to do with Alaskan natural gas Let's get to work now to provide an answer that makes sense for...our state and our nation. /552

Roy M. Huhndorf, president of Cook Inlet Region, Inc., a regional corporation created by the Alaska Native Claims Settlement Act of 1971, endorsed the alternatives search in a Anchorage Times guest editorial on June 6, 1982. /553 He proposed three characteristics as "fundamental criteria" for any alternative to the ANGTS Alaska Leg: reduced cost, access to reserves beyond the immediate Prudhoe Bay area and utilization of "existing infrastructures [i.e., facilities, transportation corridors and distribution centers].

> These are tentative thoughts meant to encourage discussion of alternatives. We have seen during these last two decades that it has made a difference when we as a state have contributed responsible, thoroughly-considered analyses to the national debate. Now is the time for us to initiate that process again. /554

Bill Sheffield, the Democratic nominee for Alaska governor, joined the chorus, emphasizing opponent Hammond's support of the waning ANGTS. /555 "The Alaska Highway route has been delayed for at least two years," he remarked, "and perhaps forever, because of severe marketing and financial problems, and this delay is already causing troubles in Alaska. Yet the present [Hammond] state administration, which has championed the Canadian route for years, is dragging its feet by not proposing alternatives. Alaska," he concluded, "should not idly stand by while a group of promoters, trading on their position with a former federal [Carter] administration, hold up Alaska's progress."

Hammond, on June 23, 1982, responded by reconstituting and enlarging the Katz task force, instituting a separate citizen advisory group, and directing both to study "all reasonable alternatives for [the] disposition of our gas," including the following:

- Continued support and possible investment in the ANGTS.
- Construction of an all-Alaska gas transmission line, along the TAPS corridor to Cook Inlet, for gas liquefaction and transport to Pacific Rim markets.
- Electric power generation within Alaska.

° Construction of a distribution line to Fairbanks, for central region service;
° Methanol and other petrochemical production. /556

The seven-member Katz panel was almost immediately eclipsed by the new advisory group, called the Governor's Economic Committee on North Slope Natural Gas and led by former governors Walter Hickel and William Egan, who served as co-chairmen. Hickel, from the start, appeared to favor an all-Alaska enterprise. He advised associates that "it might be necessary to shift from the Alaska highway route to one that would parallel the trans-Alaska Pipeline" from the North Slope to Valdez, or to deliver gas to existing facilities on the Kenai Peninsula, west of Anchorage. /557 Either way, he noted, the line would be shorter, hence less expensive, and would utilize, in Huhndorf's words, "existing infrastructures" - most importantly, the TAPS corridor and the Valdez/Kenai processing and harbor facilities.

The two former governors engaged their task with great fanfare and enthusiasm. In mid-July, they called a press conference to discuss preliminary findings. /558 "The [advisory] committee currently believes," noted Hickel, "that in view of historical facts revealed by many years of extensive studies by various groups, the most viable alternative will be a pipeline to transport the Prudhoe (Bay) natural gas to a tidewater location." This, of course, implied an all-Alaska route, which had been favored by most Alaskan businessmen ever since the El Paso plan. The committee, he said, intended to offer a formal recommendation by early 1983. "We're not going to give you [the state legislature] just a report," the former governor explained. "We're working to give you a project and someone to put it together." /559

Alaska Northwest, in the meantime, continued through its organizational transformation. On July 8, 1982, ARCO and Exxon executives assumed leadership posts on the sponsor's Alaska Leg Design and Engineering Board. /560 Sidney J. Reso, an Exxon senior vice president, was named vice chairman of the board while Claude C. Goldsmith, ARCO's chief financial officer, was elected as co-chairman of the Board's Financial Advisory Committee. The appointments led some to wonder if the Prudhoe Bay producers, at this time of project financial crisis, were gaining more control over the ANGTS project.

There had been, since the President's Decision in September 1979, much speculation over the nature of McMillian's relationship with the Prudhoe Bay producers. Some argue that animosity characterized their affairs. They claim that McMillian, hoping to maintain control over the project, maneuvered to frustrate producer influence in any Alaska Northwest decisions.

First of all, McMillian, as the lead Alcan partner, had been a successful eleventh-hour challenger to the early Arctic Gas coalition,

which included the Prudhoe Bay producers and which was foiled by the Berger Inquiry's ruling against a Mackenzie Valley route. Second, he seemed to encourage the Decision prohibition of producer equity ownership, an exclusion which denied the oil companies a major substantive means of manipulating the project. Such developments might have caused the producers to view McMillian, as some claimed, with suspicion. By this analysis, he had profited by their Arctic Gas demise and now represented the chief obstacle to their direction of the project.

Others contend that McMillian had a cooperative working relationship with the producers, who preferred a "front man" like McMillian to attend the project management issues they found so acrimonious a decade before with TAPS. In other words, McMillian, by coordinating ANGTS activities, provided the producers with a genuine management service. The oil companies, apart from the TAPS venture, were not pipeline builders or operators. Their interest in Arctic gas was to secure a transmission line for gas delivery to market. If the Alcan route was preferred by the federal government and the Canadians, the producers were willing to support it as long as the economics were sound, regardless of their opinion of McMillian. Their primary concern was gas marketing, not the means of bringing it to market.

McMillian's activities probably did not endear him to the Prudhoe Bay group. His association with Blair, an Arctic Gas defector, may have made mainstream American oil executives somewhat uneasy. But any lingering resentment, if it did exist, would not alter the fact that McMillian's ANGTS promotional success could benefit the oil firms and that his victories could be shared by the producers. The Prudhoe Bay group may have preferred, perhaps, a more direct and responsive partner, but McMillian's project objectives were generally compatible with their own. McMillian, after all, could not build his pipeline without first insuring reliable markets for producer gas.

After the waivers, the Prudhoe Bay group, eligible now for equity ownership and able to purchase it, might have alienated McMillian from project control. But they did not. One might argue, by the first line of reasoning above, that they preferred to but resisted since the project was temporarily lost anyhow and no advantage could be won by the NWA president's ouster. Since Phase II was stalled, it did not matter who was leading it.

There may be, however, a more compelling explanation: McMillian remained in authority precisely because he could, if anyone could, move the project forward under the new rules. The Texas oilman had been almost singularly responsible for securing the waivers, which would benefit the producers, through rate base inclusion of the conditioning plant, as much as the sponsors. And McMillian, as the waiver point man, served as the target for a hostile press. Remember, Bill Moyers attack on the waivers, broadcast on the CBS Evening News, centered on McMillian,

not on the North Slope producers.

The McMillian-producer relationship, assuredly, was never an easy one, but a cooperative working relationship did appear to exist. McMillian, naturally, did not wish to become a pawn of the producers, and, at least during Phase I, the producers seemed willing to allow him to operate rather freely. Of course, the producers' stakes were not really involved until Alaska. Had Phase II begun as planned, McMillian's operating freedom may have been challenged. McMillian's usefulness to the North Slope oil companies appears to be associated more with project "marketing" - selling the ANGTS idea and developing a suitable financing package - than with the more mundane aspects of project management. In other words, the producers appeared willing to support McMillian, the requisite "mover and shaker," through Phase I completion and up until the financing package was complete, when he probably impressed as the right man for the promotional job. But afterward, as some suggest, he may have lost some support to another more adept at conventional project management and, perhaps, more receptive to sponsor interests.

The speculation, doubtless, will continue, although McMillian's departure from the project in 1983, described below, rendered the issue academic. Observers regard the new NWA manager, The Williams Companies of Tulsa, as more "mainstream." It is believed that they will be more generally acceptable to the Prudhoe Bay group if and when ANGTS Phase II finally begins.

Late summer and autumn 1982 passed with rather nominal project activity, beyond the completion of East Leg construction and the opening of the line. The Northern Border celebration was somewhat subdued by the waning prospects for Phase II. The OFI, following NWA's lead, did trim its staff on September 30, 1982, from 139 to 89 positions, in the first of a series of Reductions-In-Force (RIFs). /561 Remaining technical personnel busied themselves with NWA Design Criteria Manual reviews and approvals, regulatory consultations with the FERC and a variety of other review and housekeeping responsibilities.

In late August, OFI was a primary sponsor of the "Alaska Symposium on the Social, Economic, and Cultural Impacts of Natural Resource Development," held at Alaska Pacific University in Anchorage. /562 Sheila Helgath, OFI's Alaska-based sociologist, served as conference coordinator and presented a paper on the comparative effects of federal socioeconomic programs for four major construction projects, including the ANGTS. Nearly 40 papers, on subjects such as community outreach programming, impact mitigation and social science methodology, were presented and discussed by social scientists and practioners from across North America. As Helgath observed:

> Alaskans [and other native peoples faced with massive developmental projects] can maximize the benefits of resource development and minimize its negative consequences through systematic analysis

of their communities, the development of legal mechanisms and public policy, and by learning from the efforts of others who have already tackled the human impact problems of resource development. /563

In late November, Tussing and Barlow resurfaced in print with yet another cynical look at ANGTS prospects, "The Struggle For an Alaska Gas Pipeline: What Went Wrong?", under a commission from the U.S. General Accounting Office. /564 GAO, during the 1970s, had closely monitored the TAPS experience and, with the Tussing study, hoped to tighten its conceptual grip on the ANGTS. NWA's two-year suspension announcement, coming almost immediately on the heels of the waiver approvals, left many observers confused. The federal government had made unprecedented waiver concessions to the sponsors without any apparent consequence.

"From a late-1982 standpoint," Tussing and Barlow wrote, "the Alaska Natural Gas Transportation System as it is now conceived, designed, and organized does not appear to be an economic venture." /565 Given the construction costs implied by the ANGTS design, prevailing interest rates and rates of return on equity estimated by the sponsors, "it seems unlikely that anything closely resembling ANGTS will be able to deliver natural-gas energy to the Lower-48 states at a price consumers are willing to pay.

> The present project is so far from being economically feasible, moreover, that we can not see any combination of internal project changes (changes in design, organization, or in gas-marketing or financing strategy), or regulatory and legal changes short of direct federal financial participation, which would assure construction and operation of the system. /566

Tussing's evaluation, increasingly shared by project observers, was derived primarily from four major factors, which included three "changed external circumstances." The first, a revolution in U.S. gas markets, was the most determinate. Through price deregulation, the federal government had shot its ANGTS initiative in the foot. Deregulation encouraged new domestic exploration and discovery, which increased supply and which exerted a subsequent downward pressure on Mexican and Canadian gas imports. The net effect was "as much gas available in the market as any pipeline, distributor, or industrial gas-consumer is willing to pay for," certainly enough for the next decade, at prices well below that estimated for Alaskan gas. /567

Second, the downturn in world oil prices, resulting from the recent oil glut, erased much of the competitive cost advantage which natural gas had been enjoying since the 1973 oil embargo. Third, the rapid, dramatic increases in ANGTS Alaska Leg construction costs projections, discussed earlier, did little to encourage confidence. The Alaska Leg price tag had increased five fold from 1976 until 1980, damaging NWA's cost forecasting credibility. Furthermore, high inflation and interest rates dampened enthusiasm for ANGTS investment and borrowing.

The fourth factor also involved change, changes in the perception of project need and probability. The Canadians, initially fearful that its Alberta bubble would be emptied by the East Leg and West Leg prebuilds, had realized by 1980 that substantial gas exports to the United States would not endanger their reserves. By late 1982, the Canadians failed to sell enough gas below the border to reach either export limits or the pipeline's transmission capacity, due to the new U.S. domestic gas supplies made available by deregulation. Tussing felt that the Trudeau government, by this time, was not eager for Alaska Leg completion, which might further reduce their energy exports to the United States.

The Alaskans, Tussing argued, were anxious for construction, but "lukewarm at best" to the ANGTS project, which had suffered from continuous delays. /568 They had supported the plan initially, when it appeared it was their best chance for marketing Arctic gas. However, as the Hickel-Egan task force indicated, Alaska was determined to find an alternative means of marketing its gas - one over which they had greater control and one which might yield a higher return to the state.

The producers, Tussing claimed, could "afford to wait" before pursuing Phase II, and would if they were wise. /569 They knew the current market would not be receptive to high-price Alaskan gas, even if rolled in with cheaper domestic supplies. The immediate ANGTS imperative was over. They saw little advantage, in the current energy market, to forge ahead. In addition, NWA's management controls were, by Tussing's analysis, still too high to attract sufficient producer financing. The producers, as Rhett believed, may have acquiesced to NWA's leadership during the promotional and developmental phase, but Tussing, unlike Rhett, apparently did not believe the North Slope firms would allow McMillian to manage the construction phase.

Finally, Tussing sensed a waning enthusiasm among the sponsor pipeline companies. As he reasoned:

> ...[T]here is a limit to how long and how far a company will go in pursuit of any project, and especially one where the momentum is on the decline. It is safe to say that noe of the sponsoring pipelines would want to receive Alaska gas today, when they cannot find buyers for all their existing gas purchase commitments. And as the prospect of future shortages diminishes and especially if deregulation swells gas discoveries in the 48 states, the pipeline companies may seriously question whether they will want high-cost Alaska gas within the foreseeable future. /570

"ANGTS is not a viable enterprise if the absolutely irreducible costs of Alaska gas delivered...exceed $3.50 per mmbtu (1982 dollars)," Tussing concluded. /571 The Department of Energy's latest analysis, prepared in October 1981 for waiver consideration, projected costs from $8.92 mmBtu to $10.36 mmBtu in 1982 dollars - well in excess of Tussing's threshold price. The simple mathematics, Tussing claimed, were the

essential trigger of project probability. They left little hope.

A GAO study, published in spring 1983, would prove equally pessimistic, with regard to ANGTS alternatives as well as project prospects. /572 Not only was ANGTS suspended for the near future, the GAO concluded, but no yet-conceived alternative - the all-Alaska line, the Fairbanks distribution line or the methanol/petrochemical scheme - could expect a better fate. The all-Alaska transmission line plan, apparently favored by the Hickel-Egan advisory group, relied on somewhat risky liquefaction technology and lacked secure Pacific Rim markets. Fairbanks gas distribution could not effectively compete with Prudhoe Bay oil. Finally, "Alaskan methanol would cost more to produce and deliver to U.S. markets than methanol from current sources." /573

The study concluded:

> Given the current gas surplus in the United States and uncertainties surrounding foreign LNG markets as well as future methanol and petrochemical markets, the only economic choice to use North Slope gas may be continuing to reinject it until market conditions change.... Any project to bring North Slope gas to market while uncertainties still exist about future gas demand, deregulated gas prices, and future oil prices is likely to meet skepticism from the financial community about whether a need for Alaska gas truly exists. /574

McMillian, disappointed by such dismal ANGTS prospects, turned his attention to more conventional enterprise. In a sudden, daring maneuver in November 1982, his Northwest Energy Company spent $530 million to purchase the Cities Service Gas Company of Tulsa - a move which increased Northwest's gas reserves by 86 percent (to 13.45 Tcf) and made it second in size only to El Paso among U.S. gas transmission companies. /575 "Did I bite off more than I can chew?," McMillian asked rhetorically during an interview with New York Times reporter Thomas J. Lueck. "Well, I've always been chewing on a lot." /576

McMillian's maneuver had rather substantial costs. First, his successful bid for the gas company was 35 percent higher than that which a competing firm, Celeron Corp., a Louisiana-based pipeline concern, was willing to offer. /577 Some critics felt he had paid too much for too little. Second, Cities Services, the line's previous owner, had been quite parsimonious about pipeline maintenance. The system, to remain productive, would now require expensive renovation. Finally, Northwest estimated its debt service resulting from the gas line purchase would be $40 million in 1983 - a substantial sum added at a time when gas demand was decreasing.

The move, however, was not without corresponding virtue. The Cities Service Gas Company's holdings were in the Midwest and South, contiguous to Northwest's own western and southwestern lines, thus expanding McMillian's markets. Since its formation in 1974, Northwest

had relied upon Canadian imports to supply its customers. Canadian gas, during this time, had risen 35 cents to about $4.97/MMcf, well above prevailing domestic rates and forcing McMillian to charge his customers among the highest rates in America. The new purchase provided Cities Service's large domestic reserves to mix with Northwest's comparatively expensive Canadian gas before marketing.

The purchase, according to Foster Corwith, a Dean Witter Reynolds analyst, represented a retreat from the ambitious, failing ANGTS project. With the new Cities Service venture, "Northwest can apply its management skills to something more realistic," remarked Corwith. /578 It would be, admittedly, most improbable that Northwest could finance the Cities Service acquisition at the same time ANGTS shifted into Phase II construction. In fact, Northwest could most easily make money on ANGTS now by scuttling it, and realizing a $19 million tax writeoff. But McMillian, at least publicly, would not abandon ANGTS: Phase II would go forward, he insisted, if at all possible and as soon as possible. Given the new purchase, observers would have to conclude that this would not be very soon.

To the Alaskans, the major project events of late 1982 - most importantly, the Tussing report and the Cities Service Gas purchase by Northwest - indicated an irrefutable and prolonged suspension of the Alaska Natural Gas Transportation System. The federal ANGTS initiative, raised in 1976 and approved in 1979, was, by Christmas 1982, spent. It was, by the Alaskan's reckoning, the state's turn now. Other project principals appeared resigned to ANGTS and its delay. McMillian, PG&E, Midwest distributors and consumers had, with the Northern Border prebuild and the West Leg loops, an express transmission system to bring Alberta gas south. The Canadians, although disappointed over the Phase II stall, had a new means of marketing excess gas and improving the national balance of payments. The producers, with deregulation, concerned themselves with domestic reserve expansion and sales.

The Alaskans, however, did not intend to sit idly by as their oil revenues dissipated without prospect of immediate replenishment from North Slope gas reserves. If Alaska natural gas was to be tapped, shipped and sold in a deregulated energy market early in the current decade, Alaskan leaders decided, a new pipeline plan, devised and promoted by the state, was essential.

Such a new gas plan was unveiled on January 17, 1983, at a Washington, D.C. press conference called by Hickel, the former Republican Governor of Alaska who had championed TAPS a decade before. Hickel, in announcing the findings of the Governor's Economic Committee on North Slope Natural Gas, kept his promise to present a project, "not just a report." He proposed "a better plan to build a shorter and less costly pipeline to Alaska's Pacific coast, convert the gas to liquid and ship it to Japan." /579 "Alaska's natural markets have always been Asia," Hickel claimed. "Whether it's fish, timber, or coal, it's difficult to

trade backwards" to the continental United States.

The plan, called the Trans Alaska Gas System (TAGS), envisioned an 820-mile pipeline which would stretch along the TAPS corridor, eventually delivering nearly three million cubic feet of gas daily to Nikiski, a yet undeveloped tidewater port near Kenai. /580 TAGS was designed in three phases, with the initial phase developed to stand alone financially. Estimated project cost, including liquefaction and port facilities, was about $11.6 billion for the first phase and $25.5 billion - some $20 billion less than ANGTS - for the entire system. (See FIGURE 3-16.)

ANGTS, Hickel argued, "died a natural death. No one tried harder to finance it [than NWA]. They came back to Congress twice for special legislation. Everyone hoped it [Phase II] would" succeed, but circumstances, especially the U.S. domestic gas market situation, conspired against it. /581 ANGTS was the old way; TAGS, the new. Timing, Hickel told reporters, was now critical. The Japanese, already supplied until 1990, were now assessing offers from Canada, Australia and others for gas afterward. "The window is open in Japan to a long-term energy arrangement wit the U.S. but it won't stay open. If we don't sell the gas this time it will stay in the ground for years." /582

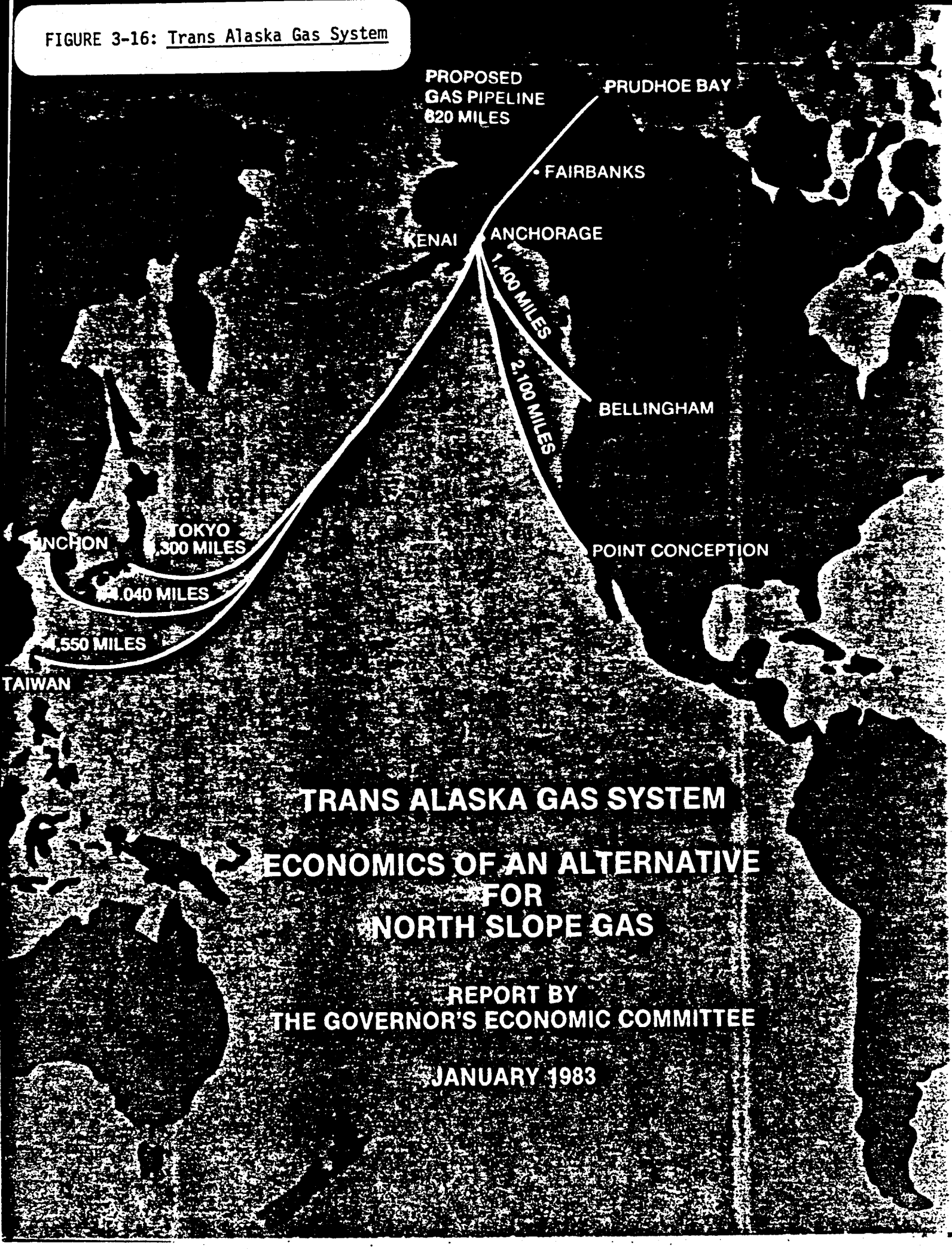
The Governor's Committee report reached several conclusions:

- TAGS "provides the best opportunity to deliver North Slope gas to market" under prevailing economic and market conditions.
- "The Pacific Rim LNG market," which consists of the U.S. West Coast, Japan, Korea and Taiwan, is the "superior market for Alaska produced resources, including natural gas."
- TAGS would cement long-term political and economic relations with Japan.
- "LNG prices in the Far East will continue to be the highest available to the Alaska energy industry," certainly higher than U.S. rates since domestic supplies have been increased by recent and projected gas deregulation.
- TAGS "with attendant conditioning and LGN manufacturing at tidewater is a concept designed to be built for the lowest possible capital costs." /583

TAGS, the report stated, was the result of the committee's efforts to meet four criteria:

1 In engineering, hold capital costs down while ensuring a pipeline capacity sufficient to carry the variety of gas liquids - propane, butane or pentanes. Brown and Root, Inc., a Houston consultancy acting as the committee's engineering collaborators, insisted that TAGS could be constructed in this manner, through the three-phase scheme.
2 In marketing, assure maximum flexibility. TAGS enabled diverse production and multiple market targeting. A variety of gas li-

FIGURE 3-16: Trans Alaska Gas System



quids could be produced and delivered, from the Gulf of Alaska, to various Pacific Rim ports, including the U.S. West Coast. Japan, the report indicated, with its extensive LNG use, would be a principal market target.

3 In financing, establish a tariff schedule which provides an adequate return for system investors and adequate compensation for Prudhoe Bay producers. Dillon, Read & Co., Inc., the New York brokerage house, believed this could be done. The firm calculated TAGS transportation cost landed in Japan between $6.94 MM/cf and $8.91 MM/cf (1988 dollars) for Phase I, compared to a Japanese price forecast of $7.89. Obviously, an element of risk was involved here. The total system tariff, however, would reduce TAGS delivery price to between $5.67 MM/cf and $7.16 MM/cf, a range below the forecasted cost. Dillon Read's analysis appeared to indicate that the full system should provide a reasonable return.

4 In the law, develop a project which would encounter as little legal delay as possible. Birch, Horton, Bittner, Prestinger and Anderson, an Anchorage-based law firm, advised the committee that while special legislation was not absolutely required, practical concerns made it compelling. The committee recommended a President's Decision, similar to that by President Carter selecting ANGTS in 1979, in favor of TAGS construction and gas export to foreign nations along the Pacific Rim. The new Decision, of course, would have to be preceded by an amendment to the ANGTA or new ANGTA-like legislation, establishing a timetable for TAGS and determining its route and general conditions. /584

TAGS, the report claimed, would bring new benefits to both the United States and Alaska. /585 For the United States, energy supplies would be dramatically increased, higher federal leasing revenues would be accrued, trade with Japan would shift into closer balance and the trade partnership would likely increase national security alliances with our Pacific Rim neighbors. Furthermore, transportation along the rim represented a natural efficiency, not currently realized by U.S. oil exports which found foreign markets only through circuitous means.

The advantages to Alaska appeared even more more substantial. First, TAGS would create primary processing facilities in Alaska, enabling a new value-added industry. "If the economics are established," the report noted, "Alaska could become a 'Gulf Coast of the North,' supplying the petrochemical needs of the Pacific nations similar to the way Texas and Louisiana's gulf coast have served the Atlantic nations for over a generation." /586 Petrochemical development, since the discovery of Arctic oil, had become a recurring Alaskan entrepreneural theme. It had been a prominent topic during both the early TAPS and ANGTS debates.

There were other benefits. TAGS would foster development of the state's "railbelt" by supplying natural gas to Fairbanks, Alaska's in-

land hub. The project would boost state revenues about the same time as Prudhoe Bay oil production was expected to wane. "Short and long term employment opportunities in Alaska are large with TAGS." /587 Root and Brown, for instance, estimated that more than 25,000 man-years would be required during the seven years of construction. For every 100 pipeline operating positions, by a U.S. Bureau of Labor Statistics measure, another 90 to 130 jobs would be necessary in various support industries.

The report's Executive Summary concluded:

> Marketing, financing, and legal approvals will govern the timetable of the project. Taking previous experience in Alaska energy projects into consideration, Brown & Root has supplied [a] timetable which the committee feels will meet the ambitions of a project sponsor. Construction could begin in three years and gas could be flowing to the market in five years if the engineering process began in 1983. /588

Reactions to TAGS, however, were not very encouraging. NWA's response was predictable. "We don't believe it is in the national interest to export the nation's largest single reserve of natural gas...to a foreign country," observed Joe Vallely, a NWA spokesman. /589 McMillian, in a press release, admitted that the Governor's Economic Committee had highlighted the leading problems, "but, as expected, the [TAGS] report does not provide any meaningful solutions." He continued:

> We know that the issue of an all-Alaskan gas pipeline is an emotional one for many Alaskans, but we hope that when the report is analyzed and studied even the project's most ardent supporters will come to realize such a system should never be seriously pursued....
>
> We do, however, see one advantage to this report: namely, that it finally puts the all-Alaska project to rest. By so doing, it will now permit Alaska and its citizens to move ahead in support of the only project approved by the U.S. government, the Alaska Natural Gas Transportation System, so that it may be completed in the earliest possible time frame.... /590

The Anchorage Times, in an editorial following the announcement, reflected a mild skepticism. /591 "The committee's recommendations [appear to] make a great deal of sense from an Alaskan standpoint," the newspaper's editors observed, , but "anything less than a studied response" by new Gov. Bill Sheffield, whose decision would be pivotal to TAGS prospects, would be shortsighted. TAGS, the editorial implied, was not worth pursuing if it was likely to encounter the same insurmountable obstacles which had suspended ANGTS.

Other observers were less kind. The All-Alaska Weekly, in a perspective entitled "Nice Try, Wally," claimed the TAGS plan had "more holes in it than Swiss Cheese.

> For the fact is that the $25 billion project envisioned by the so-called [Governor's] Economic Committee on North Slope Natural Gas makes even less economic sense than the forestalled project it's supposed to replace [ANGTS], proposed by John McMillian's Northwest Pipeline consortium.
>
> McMillian, understandably a critic of the Hickel [study]..., must be delighted with this report.... He'll be able to tear it to shreds with ease. /592

TAGS, clearly, was not without its flaws. Its chief deficiency, ironically, was related to one of its proclaimed attributes: its target markets on the Pacific Rim. While TAGS enthusiasts could identify a variety of potential customers along the rim, they could not assure a single one. Substantial Japanese LNG sales, for instance, were required for TAGS to succeed, but demand studies seemed to suggest that the "Japanese market for natural gas and gas liquids is virtually saturated for years to come." /593 "Alaska could supply [any] additional LNG needs of Japan," a GAO study observed, "but will face severe competition from existing gas exporting countries," many, such as Indonesia and Australia, which already have long-term contracts and are in a better geographical position to service the Japanese. /594

Other markets seemed even less promising. California, in 1983, was experiencing a natural gas supply glut and, according to a report from the State's Public Utilities Commission, would not require additional LNG before 1990, if at all in the foreseeable future. /595 In addition, nationwide distribution problems and added costs would discourage California landing. Korea and Taiwan LNG markets were small and uncertain, since both were currently in the process of diversifying energy sources.

A number of technical and environmental concerns arose. First, TAGS promoters expected to inject raw gas into the line, precluding the need to build a $4 billion to $6 billion gas conditioning plant in the harsh Arctic environs of the North Slope. Instead, the gas would be processed at tidewater, where terminus facilities would separate the gas liquids, condition and liquefy dry gas for tanker loading and transport - all at a construction and operation cost savings. The major disadvantage of this scheme, however, is that raw "contains roughtly 12 percent carbon dioxide which is, for all practical purposes, worthless," and would obviously reduce pipeline efficiency significantly. /596

Second, LNG conversion and transport, as discovered during examination of the El Paso plan in the mid-1970s, was more expensive and more volatile than standard dry gas transmission. The GAO estimated higher tariff charges for LNG shipment, reflecting in part estimates for LNG plant construction ($2.6 billion in 1982 dollars) and LGN ships ($1.39 billion). /597 As President Carter's staff noted in his 1979 Report:

> LNG facilities present marginally higher risks of a major accident than overland pipelines.... The United States may need to rely

more upon LNG in the future. However, the use of LNG should be chosen where there is no economically and environmentally feasible alternative. /598

Third, the President's Report, in assessing the El Paso plan, noted that LNG projects require "a careful approach to siting." /599 TAGS, following the El Paso route, involved a high-risk southern stretch over a highly active seismic area. The GAO report explained:

> Should the pipeline be rigidly installed in a buried mode, across earthquake fault zones, the probabilities are high that it could displace and eventually rupture with even a moderate earthquake. The probablities for displacement appear higher along the proposed southern route [of TAGS, after its separation from the approved ANGTS corridor]. /600

There were, apart from these marketing and technical questions, other signficant problems. One involved the existing statutory limits on American gas exports abroad, set by the ANGTS, the Natural Gas Act and the Energy Policy and Conservation Act. ANGTA declared that the delivery of North Slope gas to American markets was in the national interest. By its provisions, "the President must make (and publish) an express finding that the export will not diminish the total quantity or increase the total price of energy available to the United States." /601

There was, as well, the related legal issue of the federal government's official designation of ANGTS as the preferred system and FERC's previous tentative certification to McMillian's NWA. Although Hickel had suggested that TAGS did not necessarily have to displace ANGTS, it was most unlikely that both projects could be or would be constructed, if only due to limited investment fund availability. However, before the federal government could officially authorize TAGS, it would have to redefine its charter to McMillian. Legal opinions from both Energy and State supported this view. /602 FERC, furthermore, would face several intricate determinations, particularly in light of the recent "regulatory certainty" waiver provision. All in all, some question did exist as to whether the federal franchise, short of new congressional legislation, could be withdrawn or significantly altered.

Even if the franchise could be withdrawn, was it fair to do so? Alaska Northwest, after all, had already invested $700 million in Alaska Leg planning and design while Foothills, its Canadian counterpart, had spent $250 million on its Phase II activities. The Phase I prebuild, which cost about $2.3 billion, would not have been possible in isolation from the northern sections, bringing the total ANGTS investment to nearly $3.2 billion. This investment, furthermore, was made with the implicit understanding that the Alaska gas sweepstakes was over, that no subsequent promoter could suddenly step in and commandeer the franchise while the federal government stood idly by.

The Canadian connection posed another dimension. The Canadian government was resigned to an indefinite Phase II slip, but it was not pleased with it. ANGTS' Alaska Leg - and the planned Dempster Lateral - was the gateway to Canada's development of its own Mackenzie Delta and Arctic Island gas. Trudeau was not prepared to have the United States abandon ANGTS officially. He had edged out on a political limb for ANGTS, encouraged by declarations of support from two Presidents and repeated congressional assurances. U.S. desertion of the ANGTS initiative would have, from the Canadian perspective, an undeniable aspect of betrayal associated with it, although U.S. commitments never extended beyond private effort facilitation to guarantees. The Canadians did not hesitate to make this clear. /603

A final TAGS drawback involved energy security and domestic delivery. Energy security, of course, was originally a primary impetus for ANGTS, coming on the heels of the Arab oil embargo, rapid oil price inflation, the failure of TAPS without facilitating federal legislation and domestic gas shortages under regulation. ANGTS symbolized, among project champions like Henry Jackson, a federal determination to never again leave the nation so vunerable to foreign energy supplies. Prudhoe Bay, even untapped, was a valuable reserve which must be preserved for the nation. The ANGTA stipulation limiting North Slope gas export was a manifestation of this sentiment. TAGS, regardless of its marketing virtues and economic advantages, was not easily reconciled with this fundamental feeling that Alaskan gas should go only to American consumers.

Midwest lawmakers, whose constituents had suffered through recent gas shortages, comprised a hard underlying core of ANGTS support. Alaska gas, after all, was targeted for their communities. Would they sit by as 12 percent of the nation's natural gas reserves were transformed into LGN and shipped off to Japanese ports. Even in the midst of new, sustained domestic discovery and increased Canadian and Mexican gas import availability, general congressional consent for the TAGS plan may have been too much for the Alaskan delegation to expect from their heartland colleagues.

TAGS, therefore, would not be a simple switch. But the project did offer a fresh alternative and, at least among Alaska gas enthusiasts, opportunity for hope where, with ANGTS, hope had been lost. Despite these many problems, the TAGS idea, due mostly to Hickel's promotion and Stevens' support, gathered some momentum. In fact, in January 1983, about the time of the TAGS unveiling, President Reagan and Japanese Prime Minister Yasuhiro Nakasone, meeting to discuss a variety of economic matters, agreed to appoint a U.S.-Japan Energy Working Group (EWG) to explore the Japanese LNG market and the projected costs of delivering Alaskan gas to it. /604

Spring and early summer 1983 brought little excitement to the project, apart from the final East Leg prebuild activities, a few remaining Arctic engineering issues and reflections on TAGS challenge. NWA, the

previous December, had established an approximate $10 million budget for 1983, spending about $3.8 million in the first quarter. /605 Full-time sponsor project staff had dropped from about 100 in January 1983 to 45 people, including a few remaining contractors, by late summer. Rhett cut his own OFI staff accordingly. The agency instituted its second Reduction-In-Force (RIF) on January 3, 1983, reducing staff to 83. On April 3, a third RIF, coupled with the closing of the East Leg Field Office in Omaha, left only 45 employes. This number, by 1984, would eventually fall to 20, which Rhett considered core staff. The OFI budget, during this time, slipped to about $3 million on a annualized basis, due primarily to Rhett's own persistence in paring excessive appropriations and returning funding authorization to the federal treasury.

The Phase I prebuild, as noted in earlier sections, was operating smoothly, but well below capacity. /606 The East Leg delivered, on average, about 241 MMcf of Canadian gas daily, only 25 percent of the total volumes available under contract and export agreements. The West Leg carried an additional 48 MMcf each day, again only 20 percent of the allowable amount. These quantities, moreover, had little prospect of increasing significantly since the Canadian border price, set at $4.94 Mcf in spring 1981, exceeded the prevailing U.S. average by more than two dollars.

The Canadian government, on April 11, 1983, did move to improve its share of the U.S. market by cutting the gas export price by 11 percent, to $4.40 Mcf. Even Canadian government officials, however, admitted further reductions would be required to increase Canada's share. /607 "It was a step in the right direction," remarked a spokesman for Trans-Canada PipeLines, "but [it] wasn't a very big one." McMillian, among the nation's largest importers of Canadian gas, agreed: "It's like applying a Band-Aid when major surgury is required." Canadian officials were considering a further reduction to $3.30 Mcf for purchases in excess of 50 percent of contract volumes.

There was a second concession late that spring, one granted within the context of the ANGTS family. Pan-Alberta Gas Ltd., a division of Blair's AGTL (renamed NOVA in 1980), agreed to let Northwest Pipeline Company - and consequently three "downstream" U.S. gas purchasers - to reduce their minimum take from 70 percent to only 40 percent of contracted volumes, in exchange for loans to Canadian gas producers. /608 All four firms were Alaska Northwest members. Three of the purchasers - Northern Natural Gas, Panhandle Eastern and United Gas - imported over the new East Leg; the fourth, Pacific Lighting (a PG&E subsidiary), over the West Leg. Pacific Lighting took immediate advantage of the offer.

OFI's activity during this period focused on a few remaining Alaska activities, most importantly review of the gas conditioning plant design and examination of NWA's pioneering work on the frost heave problem. A new process considered by NWA for removing carbon dioxide from the gas stream had proven, in preliminary tests, more economical and efficient.

/609 Cost reductions would occur in both construction and operations, while deliverability would be increased by one percent. NWA had to revise its gas conditioning plant design to accommodate the new process, which was subject of OFI review. Frost heave, however, continued to be the project's greatest engineering challenge. NWA, in early summer, submitted its frost heave design criteria - a major component of the Design Criteria Manual - to the OFI for examination, along with 12 supporting documents. The Cold Regions Engineering Technical Committee (CRETC) would study the NWA criteria first and then recommend action to Rhett. This assessment process would extend well into 1984, but was to be concluded by the year's end.

Rhett's demobilization, as substantial as it had been, was insufficient to satisfy one industry analyst, Oil & Gas Journal columnist Patrick Crow. /610 In a column entitled "Inspecting ANGTS," Crow asked "what has the federal inspector's office been doing" and what would be left for it to do in the near future. Apart from design reviews, a few environmental studies, regulatory actions and permit issuances, the OFI was doing very little, he concluded. Given the project's indefinite suspension, no new tasks appeared on the horizon. "[T]axpayers," he said, "will continue to employ a federal inspector who has nothing to inspect."

Crow's observations, however, did not appear to reflect industry opinion, particularly the views of those directly associated with ANGTS. Rhett's OFI, the ANGTS sponsors knew, had genuinely facilitated the Phase I prebuild and the Alaska review process. Moreover, consolidated, centralized federal oversight management would be essential to efficient, expeditious Phase II completion. If, by any chance, NWA could start the project, they wanted the OFI available. The OFI was key to a fast start, and Rhett's strategy to reduce to a core holding group, about 10 to 20 persons, was consistent with their own thinking.

Furthermore, the OFI idea represented a major federal effort to improve responsiveness and reduce regulatory excess in a large private construction project. ANGTS officials claimed that they could not properly manage such a massive construction effort if burdened by the standard federal regulatory process. OFI was created and imposed primarily to facilitate project activity, consistent with federal law. This accommodation was not lost upon other industries, particularly in the energy development area, which might face mammoth enterprises of their own. OFI success, in terms of agency viability and independence, was in the long-term interest of industry in general.

TAGS speculation, in this period, continued to increase. Hickel, after the January unveiling in Washington, promoted the trans-Alaska gas pipeline in speeches from New York to Tokyo. In mid-March, Hickel reminded the Association of Petroleum Analysts, meeting in New York City, that TAPS "didn't just happen" and that Alaska oil's twin sister - natural gas - "was being treated like Cinderella, a step-daughter, left at home."

/611 "So far, to make the project [gas line] happen," he added, "we've relied upon the regulatory process to accomplish what really needs an entrepreneur."

Hickel criticized the federal government's failure to impose a time limit on ANGTS: "I'm here because Alaska asked the question: is it right for America to say they want our resource, refuse it and then keep us from going to market."

> If you told Kansas farmers to wait until America could eat all of their wheat instead of selling it abroad, you wouldn't be able to contain the insurrection.... [A]t the same time we sell food to an adversary like Russia, we won't sell energy to our friends [along the Pacific Rim]. /612

Alaska was Japan's first LNG supplier, he added, but now "we're the smallest. It's not that we couldn't compete...it's that we were not allowed to compete" due to the exclusive ANGTS franchise. Presently, Japanese supply was being provided by Australia, Canada, the Soviet Union and Thailand. Hickel feared a "realignment of nations" given this service agreement which might "force Japan to trade" with others such as the U.S.S.R., less sympathetic to American interests.

As Hickel was stumping, an economic consultant to his Governor's Economic Committee reported that an in-state natural gas pipeline had a better chance of succeeding than ANGTS - but neither had very promising immediate prospects. /613 The $176,000 study by Booz, Allen & Hamilton, a prominent New York City management consultancy engaged by former Gov. Hammond, found that while both TAGS and ANGTS would bring significant job and revenue benefits to the state, TAGS held "an economic edge" because of the potential Japanese market.

> The 'window of marketability' in Japan may be closing soon as several projects compete for a somewhat smaller market than originally anticipated. Thus, unless [TAGS] becomes 'the viable project' soon, it may lose its primary market. /614

In late July, attention shifted suddenly away from the ANGTS itself and toward its primary sponsor, McMillian's Northwest Energy. On August 8, Northwest announced the execution of a merger agreement with Allen & Company, Inc., a New York investment banking concern. /615 The deal, unanimously approved by Northwest's directors, would enable Allen & Company to acquire the gas transmission firm in a leveraged buyout for about $651 million, or about $31 a share, with an option for the New York firm to purchase Northwest's pipeline subsidiary, Northwest Central Pipeline Corp., at book value, listed at $382 million on June 30, 1983. (Northwest Central Pipeline Corp. was the former Cities Services Gas Company, purchased by Northwest in November 1982.)

Rumors of an impending Northwest takeover had, during the two pre-

vious weeks, increasing the company's stock nearly $8 a share, from $19.88 to $27.75. /616 During that time, some two million of Northwest's 18.6 million outstanding shares were traded. Such frantic activity left Northwest prey to covetous corporations. Already, the summer had seen El Paso purchased by Burlington Northern Inc., and Celeron Corporation fall to Goodyear Tire & Rubber Company. Under the Allen & Co. deal, Northwest could retain its existing management and some senior managers could become equity investors. The merger was approved by the Northwest board, although McMillian admitted that he consented to the deal primarily to avoid an unfriendly takeover: "[A]t least this gives us some control over our destiny," he observed. /617

The merger, however, was contingent upon Allen's ability to obtain financing, which would consist mostly of bank loans. The deal, furthermore, did not preclude another suitor from stepping in with a better offer. And, in fact, others, including major oil and railroad companies, appeared in the wings. /618 "Wall Street seems to think that the bidding for the hand of Northwest Energy isn't over," reported the Wall Street Journal's "Heard on the Street" column on August 19, less than two weeks after the Allen deal was announced. /619

The uncertainty continued for almost a month. Finally, on September 12, 1983, The Williams Companies, a Tulsa-based energy, fertilizer and metal processing firm, offered to acquire all common shares of outstanding Northwest stock for $39 each, or about $819 million. /620 This was nine dollars over the prevailing market value and eight dollars more than the previous Allen offer. Northwest management, in a press release the following day, said it would "advise its shareholders of whether it recommends acceptance or rejection of the offer" by September 23. /621

On September 20, The Williams Companies announced that the Northwest board had approved the new merger and recommended that company shareholders tender their shares to Williams. Williams also purchased rights to buy the Northwest Central Pipeline Corp., through a $26.7 million settlement with Allen, and stipulated that "Northwest [under Williams' hand] would satisfy its obligations under existing agreements with key employes..., including Northwest's Chairman and Chief Executive Officer, John G. McMillian." /622 Nine days later, it had secured $900 million in loans from seven U.S. banks to enable purchase. /623 "[W]e are very pleased with the argreement reached between The Williams Companies and Northwest Energy Company," chairman Joseph H. Williams remarked. "The merger now proposed will represent a significant forward step in the growth of The Williams Companies, while contributing major new emphasis to the pipeline sector of our business." /624

Williams, by October 5, had already purchased 71 percent of Northwest's outstanding common stock and, after extending the tender deadline, would acquire even more. /625 At a Northwest director's meeting that day, McMillian and four other top officers resigned and were replaced by nominees from The Williams Companies. Williams himself, one of the

replacements, was elected board chairman. Another, Vernon T. Jones, was elected president and chief executive officer. "While we will naturally develop plans for the integration of corporate activities of Northwest with those of The Williams Companies," Williams observed, "it is unlikely that large numbers of Northwest personnel presently in place will be affected."

John G. McMillian, the principal American sponsor and promoter of ANGTS, perhaps the most pivotal actor of the project's past, would apparently not play a major role in its future. But he would not leave the adventure empty-handed. When Williams agreed to "satisfy its [Northwest's] obligations under existing agreements," it effectively agreed to pay McMillian about $15.8 million for his resignation, under a "golden parachute" clause (which compensates company chief executives displaced during corporate takeovers or reorganizations). /626 This payment was in addition to compensation for his shares, estimated at 120,608 in early 1983, thus valued at about $4.7 million. /627 McMillian may have failed in his NWA venture, but his investment in Northwest Energy, dating back to its divestiture from El Paso in March 1973, had paid handsome dividends.

There was, naturally, much speculation among ANGTS principals as to what effect the Northwest Energy takeover might have on NWA, chief partner of the Alaska Leg consortium. The Phase II initiative, or what was now left of it, would be lost without NWA leadership.

On September 21, a day after the Northwest directors had voted in favor of the Williams Companies takeover, Rhett wrote McMillian for clarification of the action's impact on NWA and its guiding role in the ANGTS project. /628 "As you know," Rhett observed, the ANGTA requires the Federal Inspector to advise the President and Congress of any "major developments affecting the" ANGTS. Rhett noted that the public statement on merger "was silent with respect to the continued involvement of NEC [Northwest Energy Company], and its wholly-owned Northwest Alaskan Pipeline Company subsidiary, in preconstruction and construction activities for the Alaska segment of the ANGTS."

> To enable me to properly fulfill my obligations, I am requesting that you provide me by October 4 any detailed information you have relevant to the anticipated effect of the merger on the ANGTS project, including an anticipated schedule of public filings. Further, please provide to me in the future any significant new information relevant to the project. /629

On October 3, Rhett was called by Jones, Northwest's new president and chief executive officer, advising him that a written response would be forthcoming. Ten days latter, Jones wrote to assure Rhett "that there will be no significant change in Northwest's vigorous and positive stewardship of the ANGTS project," based upon the "following key considerations:"

- Prudhoe Bay gas "clearly will be vitally needed in the future to meet projected domestic energy requirements."
- It "remains the formally specificed mandate of the President and the Congress that the project be completed as soon as practicable ...."
- ANGTS "is the subject of formal agreements...with the Government of Canada" which should be honored.
- "An enormous [design] investment (over $800 million), all of it with privately supplied risk funds, has been made by the sponsoring companies," facilitating rapid project remobilization when the market conditions improve.
- The Williams Companies "has had an extentive and successful involvement in large-scale, multi-company projects.... We believe we can bring skills and leadership capabilities to the project which will make a positive contribution to this international project." /630

"In summary," Jones concluded, "you can expect that Northwest Energy Company and The Williams Companies will actively support and provide leadership to the ANGTS project."

TAGS, however, had not disappeared from the public policy agenda. On September 13, 1983, in the midst of The Williams Companies takeover of Northwest, a new company, the Yukon-Pacific Corporation, announced its intention to apply for permits to build TAGS, the all-Alaska natural gas pipeline from Prudhoe Bay along TAPS to the Kenai Peninsula. /631 The Yukon-Pacific group, which included Hickel and Egan as corporation directors, proposed a 42-inch line from the North Slope to Fairbanks and a 36-inch extension onto the peninsula. The Prudhoe Bay-Fairbanks segment, corporation officials noted, might supply gas to the ANGTS, "if that project is ever built."

Yukon-Pacific's chief executive was O. Pendleton Thomas, chairman of Penvest, Inc., a Houston financial consulting company. Thomas, former chairman of BF Goodrich and Sinclair Oil, had served in senior executive posts at ARCO, leading to speculation that ARCO was anxious to sound out TAGS, the chief ANGTS challenger. /632 As the Oil and Gas Journal reported: "To date, only ARCO ALaska Inc. has shown a positive public response to TAGS among North Slope producers, although it, Exxon Co. U.S.A. and Sohio Alaska Petroleum Co. remain formally committed to ANGTS." /633 Other Yukon-Pacific officers included Lawrence Kelley, chairman of Supra Corporation, a Houston-based energy consultancy; William Blackledge, a Supra official once an international trade executive with Gulf Oil; and Edward D. Loughney, representative of Daniel K. Ludwig, one of the world's wealthiest independent industrialists.

The Yukon-Pacific announcement came a day before members of the U.S.-Japanese Working Group on Energy convened a three-day meeting in Anchorage to discuss, among other things, the TAGS plan to export Alaska LNG to Japan. /634 The group, appointed by Reagan and Nakasone in Jan-

uary, had been exploring, for the past three months, a variety of cooperative energy plans, including Alaskan oil, gas and coal exports to Japan.

Hiroshi Kawaski, deputy director general of Japan's Agency of Natural Resources and Energy and chair of the Japanese delegation, was not optimistic about Alaska gas sales to his nation. /635 Kawaski, according to the Anchorage Times, said that Japan would need 20 percent less energy in 1990 than it now requires, due to a concerted energy conservation program, changes in Japan's industrial structure and a slower rate of economic growth. Japan, he added, was most interested in increasing its use of coal, nuclear power, solar energy and small hydroelectric power as energy sources. Furthermore, in terms of energy imports, Japan would probably be more interested in Alaska oil than gas, since it had already established reliable sources for the latter in Indonesia and Canada, and had recently agreed to a joint gas exploration venture near home with the Russians.

The Anchorage Times, despite Kawaski's sobering statements, appeared enthusiastic over September's developments: NWA's takeover by The Williams Companies, which had a reputation for moving major development projects; the creation of Yukon-Pacific, led by powerful and influential directors; and various ARCO rumblings, that it was "actively pursuing multiple options for its enormous North Slope gas reserves." /636 "All told, almost quietly," the Times observed, "it appears some things are finally happening on the North Slope natural gas front."

Enough was happening, apparently, for Murkowski, the junior Alaska senator, to arrange a new congressional hearing on "Marketing Alternatives for Alaska North Slope Natural Gas," to examine the matter officially. On November 16, 1983, such a hearing was convened by Murkowski's Subcommittee on Energy Regulation, under McClure's Senate Committee on Energy and Natural Resources. Murkowski, opening the session, summarized recent events - the Reagan/Nakasone accords, the NWA acquisition, and TAGS - and claimed, "as a consequence of these developments, it is appropriate that Congress again examine the issue of Alaska gas." /637

> On several occasions we have committed ourselves to the construction of ANGTS provided of course that it could be financed privately. If we assume for a moment that the market concerned with ANGTS cannot be privately financed given the current market conditions, then what commitment exists? ...[Furthermore, should] the private sector [be] precluded from pursuing any other alternatives[?] /638

The hearing's first witness was Rhett, who had made the trip to Capitol Hill on behalf of ANGTS and OFI many times before. In fact, less than four years before, he sat before Rep. Harold Runnels' House subcommittee to express his optimism on ANGTS development and his confidence that his infant agency could facilitate project completion in

compliance with federal laws. He had returned to defend agency budget requests and, in late autumn 1981, endorse the ANGTA waivers.

ANGTS, he reported, was currently at midstream. About $3.2 billion had been spent by the project sponsors to complete Phase I, about one-third of the total system mileage, and some $900 million invested in Phase II design and development in Alaska. "On the Alaska Leg, the bulk of the engineering needed to proceed with the final design has been accomplished," Rhett advised the committee. /639 "The engineering to date, in my opinion, has been well done and will considerably reduce the risk of the unknowns that could lead to cost overruns during construction." Additionally, all "basic regulatory actions have been completed except the final FERC certification, which requires gas contracts, the financing plan and marketability studies, and the State of Alaska right-of-way grant." In short, the stage for ANGTS Phase II was nearly set; once a financing plan was developed and approved, Rhett concluded, "the final design and construction can proceed expeditiously."

Hearing testimony was presented by panels, composed in turn of government, ANGTS, producer and TAGS officials. Rhett, the first witness of the government panel, was followed by Jan W. Mares, an Energy assistant secretary with responsibility for fossil fuels, and E. Allan Wendt, Deputy Assistant Secretary for International Energy and Resource Policy at the State Department. Both men, in opening their statements, reaffirmed U.S. commitment to the ANGTS, based upon the principle of private financing. But each declared, in Mares' words, that their departments would "not take action that would stand in the way of activities to successfully and economically develop Alaska's gas resources" in other ways. /640 As Wendt noted, "[I]t would not seem reasonable" for the federal government to discourage "private sector efforts to develop other feasible options." /641

Although ANGTS, according to legal opinion, was granted an exclusive franchise and, in Wendt's words, "the question of legislative obstacles would [eventually] have to be" confronted if an alternative was to displace ANGTS, exploratory work on the efficacy of alternatives was not out of order. "I don't see any conflict [between the government's official franchise to ANGTS and the TAGS initiative] at this stage," Wendt concluded. /642

This position pleased the Alaskans, but must have irritated the Canadians. Richard Lyon, the state's Commissioner of Commerce and Economic Development, told Murkowski that Alaska "supports any project that can reasonably offer the best prospect of bringing Alaska gas to market." /643 As a matter of equity and economics, "federal policy should allow the market to dictate the best destination for the [North Slope] gas." The Canadian government, testifying through a diplomatic note and issue brief, emphasized that it "could not have authorized the construction of expensive new [Phase I] facilities for the short-term export of gas unless it was certain of the resolve of the United States to carry out

the Agreement on Principles," which implied a Phase II commitment. /644 It concluded:

> [T]he Canadian Government remains committed to the Principles set out in the Agreement between the two countries. It continues to believe that for the national security of both countries, access to northern reserves of natural gas will be required. Consequently, the Canadian Government looks forward to continued cooperation with the United States under the Agreement to bring about its implementation. /645

The Canadian perspective was also provided by Robert L. Pierce, the Foothills president, who, as a member of the ANGTS sponsor panel, reviewed the various U.S. government affirmations of the ANGTS initiative for the subcommittee. "Based upon these [official American] commitments and various Canadian authorizations, Foothills has invested approximately $1 billion (Canadian) in prebuilding 530 miles of the Canadian segment of the project," he remarked, "and Canadian producers have invested a similar amount in necessary production and gathering facilities." Moreover, Foothills had spent about $285 million (Canadian) in preparation for Phase II construction, and would be prepared to move quickly whenever Alaska Leg financing was arranged.

The ANGTS sponsor group, however, was led by Vernon Jones, McMillian's successor as chief executive officer at Northwest Energy and NWA. He stressed the ANGTS commitment, underscored the assurances to Canada and, like Rhett, highlighted the Alaska Northwest consortium's considerable investment to date, stemming from that commitment and those assurances. He then disputed two leading TAGS contentions: that the U.S. domestic market could not absorb or afford Alaska gas and that both transmission systems could be financed and coordinated. "We are convinced...that the proved reserves of Alaskan gas will be urgently required in the lower 48 States to help alleviate predictable shortages in the years ahead," he remarked. /646 Jones, in written testimony, cited an survey of gas supply forecasts, conducted by the Congress' Office of Technology Assessment, which "foreshadow[ed] a sharp, inevitable decline in [lower 48] production at some point in the [foreseeable] future." /647

Jones rejected the dual project argument as "unrealistic":

> In addition to adding major additional design, regulatory and financing complexities to an already complex international project, it would saddle U.S. consumers with substantially higher transportation costs per unit gas received which would effectively preclude marketing the gas and financing the pipeline. /648

Furthermore, "any alternative transportation system that might be proposed," he explained, "would not only have to duplicate [ANGTS]... preparation, but it would also have to resolve major new environmental

challenges and contend with a formidable existing legal and regulatory framework which took years to put into place. And," Jones added, "it would have to establish a new statutory basis. There is no reasonable likelihood that Alaskan North Slope gas can be delivered to market earlier by means other than the ANGTS project." /649

The TAGS panel, led by Hickel and O. Pendleton Thomas, chief executive of Yukon-Pacific, admitted that TAGS faced some uncertainty. The Pacific Rim LNG market, Hickel conceded, was highly competitive, and financing would not easily be found. "We know these things," he told Murkowski. "We're willing to take the risk. And we want to urge upon you the same philosophy." /650

The TAGS group, in their testimony, hoped to make several major points. First, Hickel argued that ANGTS legislation and regulations, "in strict legal terms," did not prohibit either alternative transmission or international marketing of Alaskan gas - an interpretation which contradicted federal judgment. But ANGTS, he said, did enjoy a "perceived exclusivity," associated with the President's Decision and which Congress could erase through legislative clarification. TAGS, Thomas claimed, should be declared nonjurisdictional, or free of federal regulatory responsibility, since it was an intrastate pipeline. "[W]e think that there's no reason why FERC should have jurisdiction over these facilities," he remarked. /651

Second, as Thomas suggested, higher average prices in Japan and other Pacific Rim nations made Alaska gas, in liquid form, more marketable there than in the lower 48 states. Gas in the United States "is priced at an unrealistically low level" because regulation, imposed by political expediency and protected by public opinion. /652 "The market in Japan...is different; ...their gas has always been priced on the basis of its Btu value in comparision with oil," thus creating a greater tolerance for high-priced Alaskan gas. "We want to take advantage of that [price tolerance] differential," he concluded.

Third, TAGS advocates praised the dual project idea, including a "common line all the way down to Fairbanks with enough capacity to supply both" TAGS and ANGTS, despite Jones' skepticism. /653 Thomas, citing studies of his own, maintained that sufficient gas existed on the North Slope region to justify two systems. The National Petroleum Council, he said, estimated potential Alaskan gas reserves at 100 trillion cubic feet, nearly four times the amount of proven reserves, with a possibility of as much as 246 trillion cubic feet. /654 "The point I wanted to make, of course, is we feel there's enough gas reserves up there to accommodate" both projects.

The most critical testimony would come last, from the Prudhoe Bay producers. Their trepidation had postponed ANGTS and their blessing would be required to secure TAGS. No Alaska gas project could move without their consent and involvement; no obstacles would be too great

once that consent had been granted. Their judgment on ANGTS and TAGS, all agreed, would be most determinant.

Stuart C. Mut, an ARCO senior vice president with authority for natural gas marketing, expressed full support for ANGTS, but added his company "has again begun...to review our earlier studies and to explore other options," including TAGS:

> Atlantic Richfield believes a system involving the TAGS concept with eventual sale of LNG in Pacific Rim markets represents a concept which may be feasible and can be made compatible with the ANGTS system. We are pleased that the TAGS concept is receiving attention, and we look forward to an appropriate time when ARCO can join with other energy parties [to facilitate it]. /655

"We, at Atlantic Richfield, see no conflict between the ANGTS project and the gas line to South Alaska, which may become economic at some earlier date," Mut concluded. Mut's receptivity to TAGS was not shared by Sohio Oil Company or Exxon. Sohio, represented by president Frank E. Mosier, remained convinced "that the ANGTS project is the best means identified to date to market the Alaskan gas." /656 Sohio, in recent months, had begun to re-examine ANGTS alternatives, TAGS among them:

> There is a wide spectrum of views with regard to the prospects for the TAGS project ranging from optimism to the view that it is a very long shot at best, and until the proponents provide convincing evidence to the contrary, we are not prepared to dilute our support for the ANGTS project. /657

Sidney J. Reso, an Exxon senior vice president, found very little promise in the TAGS plan. "We have studied many alternative dispositions," he told the subcommittee, "and we continue to study them." /658 They include "marketing as methanol, markeing as LNG. We've looked at bringing the gas to tidewater and the installation of chemical facilities at tidewater." These studies lead to several conclusions. First, "the United States needs Prudhoe Bay gas," Reso claimed. Second, "[t]o the extent that Prudhoe Bay gas is not delivered to domestic markets, those markets...will have to be served by imported oil and gas." Third, contrary to Thomas' contentions, "[c]learly there is not sufficient reserves for two projects, and any current LNG export project would [have to] be in lieu of, not in conjunction with, ANGTS." Finally, "[w]e seriously question the overall commercial viability currently of exporting Prudhoe Bay gas as LNG to Asian markets," Reso remarked. Alaska gas, in the Orient, would be at a "severe competitive disadvantage" to other sources, which would not be "burdened with the additional cost of a multibillion dollar Arctic pipeline." /659 He concluded:

> We [Exxon] don't have any special inclination to do any one thing out of [stubbornness]. The judgments that we have expressed today are really based on the conclusions of studies that indicate

> that the most probable outlet for the gas, the one that has the highest probability of being successful at the earliest possible time to bring that gas to a market that is commercially secure, where we can have the best chance of competing with alternate fuels, is through ANGTS. We don't see those same things in the export market right now. /660

Without the active support of Exxon and ARCO, Prudhoe Bay gas would simply not move. It was quite obvious, well before the Murkowski hearings, that the two large oil firms considered the immediate market situation unsuited for Alaska gas sales. The issues of the Murkowski panel - mode of transmission, gas form, the target destination - were largely incidental to the basic competitiveness of North Slope gas on the world energy market. Such issues would be resolved only later, once markets softened. For now, North Slope gas could not compete. Gas reinjection would continue.

Murkowski, in summarizing the record, praised the "free spirit" and competitiveness stirred between the ANGTS and TAGS groups, but added "we [the federal government] will still maintain a franchise on the delayed [ANGTS] project that was granted waivers for an expeditious construction, and that's just the realities of it." /661 He would, however, revisit the issue among his congressional colleagues in 1984 to determine if a further analysis of TAGS was advisable. As he concluded his remarks, he reminded those in attendance that "[t]oday is November 16."

> That happens to be the anniversary of President Nixon's signing into law the Trans-Alaska Pipeline [legislation], and I would hope that these hearings will somehow resolve the expedited removal of Alaska's natural gas. /662

Epilogue

Murkowski's hopes, like those of so many others associated with the ANGTS, would not be soon realized. As spring 1985 approached, there was little prospect of project revitalization in the immediate future. The major signals - sustained domestic gas availability, projected conventional reserves in North America, reduced Canadian export prices and decreased U.S. gas demand - all indicated that ANGTS Phase II was likely to be a 1990s proposition, at the earliest.

The Yukon-Pacific group, no doubt discouraged by the rather cold public reception which its TAGS received from Sohio and Exxon, continued to press forward. On May 7, 1984, they filed a right-of-way application for TAGS with the Department of the Interior. The special U.S.-Japanese trade commission, established by President Reagan to explore Pacific Rim marketing of Arctic gas, has proceeded with its studies, but any immediate and substantial deal appears unlikely.

The Canadian Liberal government, feeling pressure to allow energy exports to the U.S. help revive its lagging economy, increase authorized volumes and lowered its border price substantially, as low as $3.14 in some instances. Trudeau, who was long caught in the tug-of-war between Canadian nationalist sentiment to preserve domestic energy and the fiscal expedience of increasing sales to the U.S., resigned just as these changes began. On September 4, 1984, the Canadian people elected the Progressive-Conservative government, and Pat Carney, the party's new energy minister, hinted that export prices could fall still further, as long as they did not drop below those paid in Canada.

Consequently, Canadian volumes on the East and West Leg Prebuilds have increased dramatically. After an average throughput of only about 35 percent of contracted capacity in Fiscal Year 1984, rates in mid-February 1985 had reached 94 percent (918 MMcf/d) on the East Leg and about 97 percent (235 MMcf/d) on the West Leg.

NBPL filed an application with the FERC in summer 1984 to expand the capacity of its system and construct and operate a 290-mile extension from Ventura, Iowas to Sandwich, Illinois. The expansion is the western segment of a proposed "Southern Route" extension, which includes a 241-mile pipeline through Indiana, built by ANR Pipeline Company, and a connecting 373-mile line, in Ohio and Pennsylvania, constructed by Ohio Interstate Pipeline Company. The Southern Route hopes to bring Alberta gas through the East Leg prebuild all the way to central Pennsylvania. Foothills is participating.

U.S. and Canadian regulatory agencies have received applications for two alternative routes. A "Northern Route," sponsored by TransCanada (like NBPL, an Alaska Northwest partner), would expand the transmission firm's system in Ontario, carrying Alberta gas north along the Great

Lakes to Niagara Falls. An associated application, still in the planning stages, calls for a connection off the TransCanada line across northern Minnesota, Michigan and the Great Lakes into New York State. Finally, a third proposal, filed as the MIDCONtinental Transportation System, will carry Canadian gas from the East Leg prebuild into the U.S. Southwest, where it would replace traditional supplies from the Gulf Coast region, which are now being depleted.

Either the Southern Route or MIDCON expansions, especially when coupled with increased Canadian exports at reduced prices, should be a boost to the East Leg Prebuild. PGT and PG&E, sponsors of the West Leg, appear anxious to complete Phase II of the project. In early 1985, the DOI issued a Right-of-Way grant to the sponsors for extension and expansion, although no immediate construction is planned.

With regard to project costs, OFI issued two final rate base determinations in 1984. In January, a final determination was granted for the West Leg, bringing its total appproved costs to almost $173 million. In late September, OFI approved $250 million for the Northern Border rate base, thereby increasing the East Leg cost approval to $1.28 billion. Finally, in Late August, an approval of NWA costs raised the approved Alaska Leg prebuild costs to nearly $604 million.

The Alaska Northwest partnership lost three charter members in late 1984 and early 1985, including the subsidaries of InterNorth Inc., the lead NBPL partner, and West Leg Prebuild sponsor Pacific Interstate Transmission Company (Pacific Lighting Corporation). Alaska Northwest activities, now considerably reduced, focused on completion of its frost heave methodology and criteria submission (some 36 volumes), receiving approvals for numerous minor pipeline alignment modifications and preparation for remobilization, whenever it might come. Actually, the approval of NWA's frost heave plan should prepare the way for final OFI authorizations of its total Design Criteria Manual (See FIGURE 3.9), which are expected in early 1985 and which will serve as the basis for mile-by-mile engineering design after remobilization.

Both the OFI and the Northern Pipeline Agency (NPA), its Canadian counterpart, have reduced staff and operations to correspond with declining project activity. OFI staff, numbering as many as 142 in July 1981, fell to 15 in February 1985, some six months after the agency closed its Fairbanks and Irvine offices. Remaining personnel were occupied with engineering review, remobilization issues and options for organization disposition (fold-in with another federal agency.) A Fiscal Year 1986 budget was presented to the House Appropriations Committee for $864,000, although the Federal Inspector intended to spend far less under a fold-in arrangement. The Canadian NPA, shifted to the Transport Ministry, also employed about 15 people, but mostly on a part-time basis, in February 1985.

On March 6, 1985, Rhett appeared before the House Appropriations Subcommittee on the Department of the Interior and Related Agencies to discuss the status of the Alaska Natural Gas Transportation System and his agency's budget request for FY 1986. "After careful consideration of the OFI's authorizing legislation and its ongoing responsibilities," Rhett explained, "we have begun exploring the options for affiliating the OFI on a temporary basis with another federal department until the project is remobilized.

> The objective will be to provide organizational efficiencies, better support the daily operations of the OFI, better utilize remaining staff, and offer cost savings in the process. At the same time, we will seek to maintain the integrity of the OFI's mission and legal authorizations until the agency can once again practicably operate [independently].

It was obvious, from the questions and remarks of Rep. Sidney R. Yates (D-Ill), the subcommittee's chairman, that something had to be done with the OFI. As Rep. Ralph S. Regula (R-Ohio) asked in written interrogatories, would it not be best for the OFI to expire and turn its functions over to the federal department with which it intended to affiliate. "Are we not," he wondered, "just wasting the little money you are requesting?" It was a hard question, one to which the Congress and the Office of Management and Budget would now have to turn.

OFI History Part II

Footnotes

No.

1 Interview, John T. Rhett, 9/20/83.

2 Hearings, "Alaska Natural Gas Transportation System," Subcommittee on Oversight and Investigations, House Committee on Interior and Insular Affairs, 10/15-16/79, Serial No. 96-22 (Washington: Government Printing Office, 1980) p. 74.

3 Interview, Rhett, 9/20/83.

4 OFI Transition Book, "Personnel Information Package" (Tab W), 12/31/80.

5 Task Force Notes: Springer to Task Team Leaders, President's Reorganization Project, "Team & Task Identification," 9/21/78.

6 "OFI Roster of Permanent Employees", 10/21/80.

7 OFI Quarterly Report #1, 10/9/79, p. 9.

8 IBID., p. 8.

9 Letter, Soulen to McIntyre, OFI, 5/23/79.

10 OFI Quarterly Report #1, 10/9/79, p. 13.

11 IBID., p. 13.

12 Order 31: "Order Setting Values for IROR, Establishing Inflation Adjustment and Change In Scope Procedures, and Determining Applicable Tariff Provisions," Federal Energy Regulatory Commission (FERC) Docket No. RM78-12, 6/8/79.

13 IBID., pp. 41-54.

14 IBID., p. 120.

15 Order 31-B: "Rehearing," FERC Docket No. RM78-12, 9/6/79.

16 OFI Quarterly Report #1, 10/9/79, pp. 18-19.

17 IBID., p. 19

18 The Alaska Natural Gas Transportation Act (ANGTA), (P.L. 94-586), Section 17, 10/22/76.

19 John T. Rhett Nomination, Hearing before the Senate Committee on Natural Resources, 6/22/79, p. 6.

20 IBID., p. 36.

21 P.L. 94-586 (ANGTA), Section 7 (a)(s)(d), 10/22/76, p. 36.

22 IBID.

23 Oversight Hearings, 10/15-16/79.

24 IBID., pp. 1-2.

25 IBID., p. 4.

26 IBID., p. 8.

27 IBID., p. 11.

28 IBID., p. 4.

29 IBID.

30 IBID., p. 18.

31 IBID., p. 22.

32 IBID., p. 25.

33 IBID.

34 IBID., pp. 26-27.

35 IBID., pp. 35-37.

36 IBID., p. 37.

37 IBID.

38 IBID., p. 723. (Testimony of Mark J. Millard)

39 IBID., p. 40.

40 IBID., p. 41.

41 IBID.

42 IBID.

43 IBID., p. 42

44 IBID.

45 Adger, John A., "Report to the Commission on Shipper Tracking of ANGTS Charges," FERC, 5/82 (Revised 9/17/82), Docket No. RM81-21, CP78-123 et al), p. I-2.

46 Oversight Hearings, pp. 150-151.

47 IBID., p. 22.

48 IBID., p. 869. (Testimony of Robert H. Loeffler, Morrison & Foerster, Counsel to the State of Alaska)

49 IBID., p. 370.

50 IBID., p. 871.

51 IBID.

52 IBID., p. 872.

53 IBID., p. 875.

54 IBID., pp. 876-877.

55 IBID., p. 723. (Statement of John A. Sproul, Chairman, Pacific Gas Transmission)

56 IBID.

57 IBID., p. 56.

58 IBID., p. 57.

59 IBID., p. 60.

60 IBID., p. 65.

61 IBID.

62 IBID.

63 IBID., p. 66.

64 IBID., p. 76.

65 IBID., p. 78.

66 IBID., p. 79.

67 IBID., p. 89.

68 IBID.

69 IBID., p. 93.

70 IBID., p. 967.

71 IBID., p. 93.

72 IBID., p. 96.

73 IBID., p. 97.

74 IBID., p. 99.

75 IBID., p. 100.

76 IBID.

77 Peacock, Donald, People, Peregrines and Arctic Pipelines, (Vancouver: J.J. Douglas, 1977), pp. 188-9.

78 Tussing, Arlon R., and Connie C. Barlow, "The Alaska Highway Gas Pipeline: A Look at the Current Impasse," Institute of Social and Economic Research (ISER), University of Alaska, 1/12/79, p. 4.

79 IBID., p. 44.

80 IBID., pp. 23-24.

81 IBID., pp. 26-27.

82 IBID., pp. 36-37.

83 IBID., pp. 26-27.

84 IBID., pp. 14-15.

85 IBID., p. 44.

86 Tussing, Arlon R. and Connie C. Barlow, "Financing The Alaska Gas Pipeline: What Is To Be Done?," ISER, University of Alaska, 4/77, p. 111.

87 IBID., p. 1.

88 IBID., p. 8.

89 IBID., pp. 16-17.

90 IBID., p. 12.

91 Tussing etal., "The Alaska Highway Gas Pipeline: A Look at the Current Impasse," p. 55.

92 Interview, Lloyd W. Ulrich, 9/1/83.

93 IBID.

94 OFI Quarterly Report #3, 4/18/80, p. 7.

95 OFI Quarterly Report #5, 10/22/80, p. 3

96 Skinnarland, Einar, "An Overview Study with Respect to Effectiveness of the Stipulations During the Construction Phase and an Analysis of Experience Gained Which May Be of Use for Grant of Right-of-Way for Future Pipeline Projects," Mechanics Research, Inc., Final Report, 9/77. Also, see Brelsford, Harry G., "Governmental Monitoring of Major Projects," 9/78; and General Accounting Office, "Lessons Learned From Constructing the Trans-Alaska Oil Pipeline," EMD-78-52, 6/15/78.

97 Task 1 Report, "Summary of Management Processes and Information Requirements," Touche Ross & Company for the Office of the Federal Inspector, 12/3/79, Revised 4/80.

98 Task 2 Report, "Conceptual Design of the FIMIS," Touche Ross & Company for the Office of the Federal Inspector, 2/7/80.

99 "FIMIS" Briefing Slides, p. 5.

100 Task 2 Report, Part 2, "Subsystem Descriptions," pp. 15-136.

101 Interview, Robert Inglis, 8/8/83.

102 "Draft Request for Proposal," Touche Ross & Company for the Office of the Federal Inspector, 6/80.

103 Task 3 Report, "Requirements for the FIMIS," Touche Ross & Company for the Office of the Federal Inspector, 8/31/80.

104 "Phase II MIS Mobilization Plan," American Management Systems, Inc., for the Office of the Federal Inspector, 9/83. Chapter 1 summarizes the agency's MIS history.

105 Figel, John, "Cost of Service for the ANGTS", Office of the Federal Inspector, 10/18/81.

106 OFI Quarterly Report #11, 4/19/82, p. 10.

107 "OFI Update #21," 7/8/81, p. 6.

108 "OFI Update #1," 1/21/80, p. 5.

109 OFI Quarterly Report #3, 4/18/80, p. 8.

110 OFI Transition Book, "Major Activities of the OFI: Engineering," 12/31/80, p. 7.

111 "Obtaining a Right-of-Way on Public Lands," Department of the Interior, Bureau of Land Management (Washington: Government Printing Office, 1982) No. 0-389-809, p. 1.

112 IBID, pp. 4-10.

113 Interview, Herb Cobleigh, 1/12/84.

114 Letter, Robert E. Reed (PGT) to Soulen, EPB, 7/25/78.

115 OFI Quarterly Report #3, 4/18/80, p. 2.

116 "Grant of Right-of-Way for the Alaska Natural Gas Transportation System," Eastern Segment, Department of the Interior, Serial No. IN-29397, 3/11/81.

117 "Grant of Right-of-Way for the Alaska Natural Gas Transportation System," Alaska Segment, Department of the Interior, Serial No. F-24538, 12/1/80.

118 Saunders, M. Elizabeth, The Regulation of Natural Gas: Policy and Politics, 1938-1978 (Philadephia: Temple, 1981), p. 241. Saunders provides a definition of certificate in her glossary.

119 Haas, Jerome, "The ANGTS Primer: All You Wanted to Know About ANGTS and More," prepared for the Office of the Federal Inspector, 4/81, Revised 6/81, p. 15.

120 See "Applications for Certificates of Public Convenience and Necessity and for Orders Permitting and Approving Abandonment" under Section 7 of the Natural Gas Act. Subpart A: "Applications for Certification of Public Convenience and Necessity..." Section 157.5 to 157.22. Also, Code of Federal Regulations 18, "Conservation of Power and Water Resources," Part 150 to End Revised as of 4/1/80, pp. 73-93.

121 "Chronology of Major Events," OFI, (Updated to June 1982).

122 Berman, J. Richard, "Questions and Answers for Congressional Hearings," 1/7/84, p. 1. These questions assess the validity of the IROR.

123 OFI Quarterly Report #7, 4/20/81, p. 13.

124 OFI Quarterly Report #13, 10/25/82, p. 5.

125 OFI Quarterly Report #3, 4/18/80, p. 8.

126 Hass, "The ANGTS Primer," pp. 15-17, 55-61.

127 IBID, p. 55.

128 Figel, "Cost of Service for the ANGTS."

129 OFI Quarterly Report #1, 10/9/79, p. 13.

130 "OFI Update #1," /1/21/80, p. 3.

131 OFI Quarterly Report #3, 4/18/80, p. 2.

132 Hass, "The ANGTS Primer," p. 60

133 "Chronology of Major Events," OFI, (Updated to June 1982).

134 IBID.

135 "The Work Continues," The Alaska Gas Pipeline Project Foothills Pipe Lines, Annotated chronology, Undated.

136 IBID.

137 IBID.

138 IBID.

139 Bill C-25, An Act to establish the Northern Pipeline Agency, to facilitate the planning and construction of a pipeline for the transmission of natural gas from Alaska and Northern Canada and to give effect to an Agreement between Canada and the United States on principles applicable to such a pipeline and to amend certain Acts in relation thereto. Passed by the (Canadian) House of Common, 4/4/78.

140 "OFI Update #5," 5/10/80, p. 4.

141 "OFI Update #6," 5/7/80, p. 3.

142 "OFI Update #7," 3/22/80, pp. 3-4.

143 IBID.

144 "OFI Update #10," 8/4/80, p. 2.

145 IBID., pp. 1-2.

146 IBID.

147 "The Work Continues," Foothills, Annotated chronology.

148 IBID.

149 OFI Quarterly Report #2, 1/17/80, p. 10.

150 John T. Rhett's Remarks before the Congressional Steel Caucus, 10/1/80.

151 OFI Quarterly Report #2, 1/17/80, p. 10.

152 OFI Quarterly Report #4, 7/17/80, pp. 16-17. Also, "OFI Update #8," 6/13/80, pp. 1-2.

153 "OFI Update #8," 6/13/80, pp. 1-2

154 OFI Quarterly Report #5, 10/22/80, pp. 14-15.

155 IBID.

156 Rhett's Remarks, p. 10.

157 Interview, C. Allen Olson, 8/10/83.

158 "The Work Continues," Foothills, pp. 6-8.

159 Sharp, Mitchell, "The Alaska Highway Natural Gas Pipeline: A Case Study in a Joint Effort Through Two Governmental Systems," Presidential Studies Quarterly, XI:1 (Winter 81), pp. 52-57.

160 IBID., p. 54.

161 IBID., p. 55.

162 IDID., p. 56.

163 IBID.

164 Reorganization Plan No. 1 of 1979, 6/12/79.

165 OFI Transition Book, Insert J, p. 5.

166 IBID.

167 Hale, Dean, "Northern Border Line in Operation," Oil and Gas Journal (November 1982). Also, "Northern Border Has Busy 1982 Construction Program," Pipeline (June 1982).

168 OFI Transition Book, Insert J, p. 7.

169 OFI Quarterly Report #5, 10/22/80, pp. 3-5. Also, OFI Quarterly Report #6, 1/23/81, p. 5.

170 OFI Quarterly Report #9, 10/26/81, pp. 7-8.

171 OFI Quarterly Report #10, 1/19/82, p. 10.

172 OFI Quarterly Report #12, 7/29/82, p. 11.

173 OFI Quarterly Report #13, 10/25/82, p. 8-9.

174 OFI Quarterly Report #14, 1/26/83, p. 5.

175 OFI Quarterly Report #17, 10/24/83, pp. 5-6.

176 "OFI Update #13," 12/22/81, p. 4.

177 OFI Quarterly Report #7, 4/20/81, p. 8. Also, OFI Quarterly Report #8, 7/21/81, p. 10.

178 OFI Quarterly Report #15, 4/28/83, p. 3.

179 "OFI Update #21," 7/8/81, p. 6.

180 OFI Quarterly Report #15, 4/28/83, p. 8.

181 Letter, Berman to Rhett, OFI, 12/3/84.

182 "Final Determination for Approving in Part and Disallowing in Part Expenditures Claimed for Inclusion in Rate Base by the Northern Border Pipeline Company," Order 10 CFR XV, OFI, 9/7/83.

183 OFI Quarterly Report #15, 4/28/83, p. 3.

184 OFI Transition Book, Section 4, p. 1.

185 IBID., p. 3.

186 IBID., pp. 3-4.

187 Bardach, Eugene and Robert A. Kagan, Going By the Book: The Problem of Regulatory Unreasonableness (Philadelphia: Temple, 1982)

188 Letter, Hugh G. Robinson, Army Corp of Engineers, to Soulen, 8/9/78. Also, "Environmental Monitoring Committee," OFI Executive Policy Board (EPB), 7/27/78.

189 OFI Quarterly Report #4, 7/17/80, p. 11.

190 OFI Quarterly Report #6, 1/23/81, p. 9.

191 OFI Transition Book, section G, p. 1.

192 IBID., p. 1.

193 OFI Quarterly Report #7, 4/20/81, p. 8.

194 OFI Quarterly Report #16, 7/22/83. p. 5.

195 OFI Quarterly Report #17, 10/24/83, p. 11.

196 OFI Quarterly Report #17, 10/24/83, p. 10.

197 OFI Quarterly Report #3, 4/18/80, p. 8.

198 OFI Quarterly Report #6, 1/23/81, pp. 8-9.

199 "Requirements for Equal Opportunity During Construction and Operation of the Alaska Natural Gas Transportation System," Federal Register, OFI, 5/12/80.

200 "OFI Update #7," 5/22/80, p. 7.

201 "OFI Update #9," 7/10/80. p. 4.

202 "OFI Update #16," 1/29/81, p. 1.

203 "OFI Update #17," 3/4/81, p. 2.

204 "OFI Update #22," 8/13/81, p. 1.

205 Chomko, Stephen and William Butler, "Cultural Resource Compliance Program for the Office of the Federal Inspector," OFI, 9/25/84. p. 10. See Chapter IV, "OFI Cultural Resource Program History."

206 "OFI Update #5," 5/10/80, p. 2.

207 OFI Quarterly Report #10, 1/19/82, pp. 15-16.

208 "OFI Update #25," 11/18/81, p. 2.

209 Chomko and Butler, "Preface," p. 2.

210 Chomko and Butler, pp. 17-20.

211 "OFI Update #5," 5/10/80, p. 1.

212 "San Francisco Field Office History," West Leg Prebuild 1980-82, OFI, pp. 2-3.

213 IBID., p. 3.

214 IBID.

215 Interview, Richard Russell, 4/4/84.

216 "San Francisco Field Office History," p. 5.

217 IBID., pp. 5-6.

218 Toskey, William M., "The ANGTS West Leg Prebuild Project, Pacific Gas Transmission Pipeline Field Girth Welding QA/QC Program for Radiographic Testing," OFI, 2/25/82.

219 Interview, Russell, 4/4/84.

220 IBID.

221 Saunders, pp. 165-192.

222 Interview, John A. Adger, Jr., 9/26/82.

223 "OFI Update #3," 2/29/80, pp. 1-2.

224 "OFI Update #4," 3/20/80, p. 7.

225 "OFI Update #6," 5/7/80, p. 2.

226 IBID.

227 "OFI Update #7," 5/22/80, pp. 1-2.

228 "OFI Update #9," 7/10/80, pp. 1-2.

229 IBID.

230 "OFI Update #12," 9/22/80, p. 3.

231 OFI Quarterly Report #5, 10/22/80, p. 6.

232 "OFI Update #15," 12/22/80, pp. 3-4.

233 OFI Quarterly Report #6, 1/23/81, p. 6.

234 "OFI Update #16," 1/29/81, p. 2.

235 Letter, McMillian to Siegele (Exxon), Mosier (Sohio), Benson, (ARCO), Northwest Alaskan Pipeline Company 5/21/81. Reference: "Project Financing Plan - Alaska Pipeline and Gas Conditioning Plant."

236 OFI Quarterly Report #8, 7/21/81, pp. 7-8.

237 Letter, McMillian to Siegele etal., 5/21/81.

238 Letter, Bankers to McMillian, 6/3/81. From "The President's Alaska Natural Gas Transportation Act Waiver Recommendation," Hearings (Senate Waiver Hearings) before the Senate Committee on Energy and Natural Resources, October 22, 23 and 26, 1981. Publication No. 97-38, pp. 473-7.

239 IBID.

240 IBID.

241 Letter, McMillian to Reagan, 6/17/81.

242 IBID.

243 IBID.

244 IBID.

245 Letter, Dingell, Sharp, Udall, Broyhill, Brown and Lujan to Stevens, 7/22/81. From "Alaska Natural Gas Transportation System," Joint Hearings (House Waiver Hearings) before the House Committee on Energy and Commerce and the House Committee on Interior and Insular Affairs, October 21, 22, 23 and 27, 1981. Serial No. 97-114 (Part I) and 97-115 (Part II), p. I40.

246 IBID., p. 41.

247 IBID.

248 Letter, Stevens, Murkowski, Jackson, McClure to Reagan, 7/24,81. House Waiver Hearings, p. I26.

249 IBID.

250 IBID., p. I27.

251 IBID.

252 "Draft Waiver Packages," 7/24/81. House Waiver Hearings, p. I28.

253 Letter, Stevens etal. to Reagan, 9/14/81. House Waiver Hearings, pp. I30.

254 IBID., p I30-31.

255 IBID., p. I31.

256 IBID., p. I32.

257 Pound, Edward T., "Ex-Reagan Aides Firm in Pipeline Fight," The New York Times, 12/9/81.

258 Bill Moyers Commentary, CBS Evening News, 12/8/81.

259 Honerich, John, "Oil Baron's Clout Unsnarled Pipeline's Path," Toronto Star, 12/13/81.

260 IBID.

261 Interview, Al Cobb, 4/16/82.

262 Letter, Dingell, Udall, Sharp to Reagan, 9/23/81.

263 Letter, Broyhill and Brown to Reagan, 9/23/81.

264 IBID.

265 IBID.

266 Message from the President to the Congress of the United States, "Waivers to Permit Expedited Construction of the Alaska Natural Gas Transportation System," 10/15/81, House Docket No. 97-100. See House Waiver Hearings, pp. I323-7.

267 Congressional Record, 10/19/81, pp. S11603-8.

268 Senate Waiver Hearings.

269 IBID., pp. 18-23.

270 IBID., p. 39.

271 IBID., pp. 149, 250, 254.

272 IBID., p. 234.

273 IBID., p. 249.

274 IBID., p. 273.

275 IBID., pp. 428-433.

276 IBID., p. 33.

277 IBID.

278 IBID., pp. 34-5.

279 IBID., p. 662.

280 IBID., p. 663.

281 IBID., p. 667.

282 Letter, Banks to McMillian, 8/28/81. From Senate Waiver Hearings, pp. 481-7.

283 Senate Waiver Hearings, p. 460. Testimony of H. Anton Tucher.

284 IBID., p. 455.

285 IBID., pp. 455-456.

286 IBID., p. 461.

287 House Waiver Hearing, p. I356.

288 IBID., p. I357.

289 IBID., p. I359.

290 IBID., pp. I360-361.

291 IBID., p. I689.

292 IBID., p. I698.

293 IBID., p. I702.

294 IBID., pp. I463-4.

295 IBID., pp. II417-8.

296 IBID., p. II418.

297 IBID., p. II420.

298 IBID., pp. I690-1.

299 IBID., p. II466.

300 IBID., pp. II464-5.

301 IBID., p. II467.

302 IBID., p. II401.

303 IBID., p. II693.

304 IBID., p. II711.

305 IBID., pp. II733-4.

306 Committee Report, "Providing For a Waiver of Law Pursuant to the Alaska Natural Gas Transportation Act of 1976," House Committee on Interior and Insular Affairs, Report No. 97-350 Part I. Also, Committee Report, "Waivers for the Alaska Gas Pipeline," House Committee on Energy and Commerce, Report No. 97-350 Part II.

307 P.L. 94-586 (ANGTA), Section 8.

308 Congressional Record, 11/19/81, pp. S13695-6.

309 IBID., pp. S13696-7.

310 IBID., p. S13697.

311 IBID., p. S13700.

312 IBID., 11/16/81, p. H8305.

313 IBID., 12/8/81, p. H8909.

314 IBID., p. H8910.

315 IBID., p. H8912.

316 IBID., pp. H8910-1.

317 IBID., p. H8910.

318 IBID., p. H8915.

319 IBID., p. H8919.

320 IBID., p. H8920.

321 IBID., p. H8929.

322 Committee Report, "Waivers for the Alaska Gas Pipeline," p. 13.

323 Congressional Record, 12/8/81, p. H8914.

324 IBID., 11/19/81, p. S13698.

325 Editorial, The New York Times, 12/8/81.

326 House Waiver Hearings, p. II464.

327 Congressional Record, 12/8/81, pp. H8922-3. Letter from Bryson to Sharp reproduced.

328 Message from the President, "Waivers," 10/15/81. "Synopsis of Waivers."

329 Congressional Record, 11/19/81, p. S13694.

330 IBID., 12/8/81, p. H8914.

331 IBID., p. H8915.

332 IBID., 12/10/81, p. H9094.

333 House Waiver Hearings, p. II466.

334 Congressional Record, 11/19/81, pp. S13696-7.

335 Committee Report, Waivers for the Alaska Gas Pipeline, pp. 31-2.

336 Message from the President, "Waivers," 10/15/81. "Synopsis of Waivers."

337 Congressional Record, 11/19/81, p. S13695.

338 IBID., p. S13699.

339 Message from the President, "Waivers," 10/15/81. "Synopsis of Waivers."

340 Congressional Record, 12/8/81, p. H8914.

341 IBID., 11/19/81, p. S13700.

342 Editorial, The New York Times, 12/8/81.

343 Bill Moyers Commentary, CBS Evening News, 12/8/81.

344 Congressional Record, 12/8/81, p. H8921.

345 IBID., 12/10/81, pp. H9088-9.

346 Editorial, Washington Post, 11/16/81.

347 Congressional Record, 12/8/81, p. H8911.

348 Shribman, David, "Gas Lobbyist Celebrates Pipeline Bill," Anchorage Daily News, 12/17/81.

349 Editorial, Newsday, 12/17/81.

350 Editorial, Boise (Idaho) Statesman, 12/15/81.

351 Editorial, St. Petersburg (Florida) Times, 12/13/81.

352 Editorial, Syracuse Post-Standard, 12/11/81.

353 "Pipeline Suit Rejected But Metzenbaum Won't Give Up," Fairbanks Daily News-Miner, 4/23/82, p. 13.

354 Metzenbaum etal. v. Federal Energy Regulatory Commission, "Complaint Against the Federal Energy Regulatory Commission for Declaratory and Injunctive Relief Pursuant to 15 U.S.C. Section 719h(c)(1)," 1/28/82.

355 Fairbanks Daily News-Miner, 4/23/82, p. 13.

356 "OFI Update #11," 8/25/80, p. 4.

357 "OFI Update #6," 5/7/80, p. 1.

358 "OFI Update #10," 8/4/80, p. 1.

359 IBID., p. 2.

360 "OFI Update #12," 9/22/80, p. 1.

361 IBID.

362 IBID.

363 Editorial, Grand Forks (North Dakota) Herald, 8/25/80.

364 Grand Forks (ND) Herald, 9/14/80.

365 North Dakota Public Service Commission v. Federal Energy Regulatory Commission etal., "Brief In Support of Motion of Plaintiffs...For Summary Judgment," U.S. District Court for North Dakota, Civil Action No. A1-80-139.

366 IBID., p. 27.

367 "OFI Update #13," 10/21/80, p. 1.

368 IBID.

369 "OFI Update #14," 11/17/80, p. 4.

370 Bismarck (North Dakota) Tribune, 12/9/80.

371 "OFI Update #15," 12/22/80, pp. 3-7.

372 "OFI Update #13," 10/21/80, p. 2.

373 "OFI Update #15," 12/22/80, p. 5.

374 "OFI Update #17," 3/4/81, p. 5.

375 "OFI Update #15," 12/22/80, p. 5.

376 "OFI Update #16," 1/29/81, p. 1.

377 "OFI Update #18," 3/26/81, p. 1.

378 IBID., p. 3.

379 "OFI Update #19," 4/28/81, p. 2.

380 "Inside FERC," Federal Energy Regulatory Commission, 4/23/81, p. 7.

381 "OFI Update #19," 4/28/81, p. 1.

382 IBID.

383 "OFI Update #20," 6/3/81, p. 2.

384 Interview, Dennis Schroeder, 6/25/84.

385 OFI Quarterly Report #7, 4/20/81, p. 4.

386 OFI Quarterly Report #8, 7/21/81, p. 3.

387 OFI Quarterly Report #10, 1/19/82, p. 4.

388 Interview, Schroeder, 6/25/84.

389 Schroeder, Dennis, "Northern Border Pipeline Company - East Leg Weld Cracking Problem," Briefing to the Federal Inspector, 1/6/82, p. 2.

390 IBID.

391 "Welding Fact Sheet," OFI, 3/21/82.

392 Schroeder, "Weld Cracking Problem," 1/6/82.

393 Interview, Schroeder, 6/25/84.

394 IBID.

395 IBID.

396 Judah, Melvin A., "Meeting With Northern Border Pipeline on Anticipated Waiver Petition for Welding Defect Repairs," Department of Transportation, 3/10/82.

397 News Release, Northern Border Pipeline Company, 3/22/84.

398 IBID.

399 Watertown (South Dakota) Public Opinion, 3/20/82; Omaha World Herald, 3/23/82; Des Moines Register, 3/19/82; Williston Daily Herald, 4/20/82.

400 Polansky, Daniel, "Trip Report of Special Observation 5: A Review of Northern Border Pipeline - Department of Transportation Audit Procedures, January 27 to February 5, 1982," National Bureau of Standards.

401 IBID., p. 2.

402 Letter, Judah to Pyle (NBPL), Department of Transportation, 4/2/82.

403 Ulrich, Lloyd W., "Status of Northern Border Pipeline Company Weld Waiver Request," Department of Transportation, 4/13/82.

404 Letter, Pyle to Judah, Northern Border Pipeline Company, 4/20/82. "Matter of NBPL, Docket No. 82-3W."

405 IBID., pp. 4-8.

406 Schroeder, Dennis, "NBPL-East Leg Waiver Request: State Reactions," OFI, 3/21/82.

407 Letter, Iowa State Commerce Commission to Department of Transportation. "DOT Docket No. 82-3W, Notice of NBPL Petition for Waiver of Pipeline Welding Requirement of 49 CDR 192.245."

408 Letter, Santman to Rhett, Department of Transportation, 4/26/82.

409 Letter, Rhett to Santman, OFI, 4/30/82.

410 IBID.

411 Letter, Santman to Rhett, Department of Transportation, 5/5/82.

412 "Welding Fact Sheet," OFI, 3/21/82, p. 3.

413 IBID.

414 OFI Quarterly Report #11, 4/19/82, pp. 3-5.

415 OFI East Leg Construction History, 1981 Season, "Missouri River Crossing," 6/1/82, p. 7.

416 IBID., "Oahe Reservoir Crossing," p. 3.

417 IBID., "Spread No. 5," 3/1/83, p. 1.

418 IBID., p. 2.

419 IBID., p. 5.

420 OFI Quarterly Report #12, 7/29/82, p. 6.

421 IBID.

422 IBID., p. 7.

423 "OFI Update #32," 7/8/82, pp. 1-2.

424 OFI Quarterly Report #12, 7/29/82, p. 7.

425 Glasgow (Montana) Courier, 10/8/81.

426 Bismarck (North Dakota) Tribune, 7/10/82, p. 9.

427 IBID.

428 Tracy (Montana) Headlight Herald, 6/10/82.

429 IBID.

430 OFI East Leg Construction History, 1982 Season, "Spread No. 5," 3/3/83, p. 2.

431 IBID., "Compressor Station #4," 9/27/82, p. 6.

432 IBID., "Remedial Weld Program," 2/25/83, p. 15.

433 IBID., pp. 15-16.

434 Loomis, Dean D., "Assessment of Overall Environmental Program," OFI After Action Report, 3/18/83, p. 17.

435 Morton, John H., "Assessment of Federal-State Cooperation and Field Enforcement on the East Leg," OFI After Action Report, 1/21/83.

436 IBID., p. 13.

437 IBID.

438 IBID., p. 14.

439 Morton, John H., "Government Oversight Role During Compressor Station Construction," OFI After Action Report, 1/31/83, p.4.

440 Steward, M.E., "Foothills Pipeline Project Prebuild Being Completed," Pipeline (June 1982), pp. 26-30.

441 "OFI Update #34," 10/8/82, p. 1.

442 OFI Quarterly Report #13, 10/25/82, p. 5.

443 "OFI Update "34," 10/8/82, p. 1.

444 USA Today, 10/5/82.

445 Hale, "Northern Border Line in Operation."

446 OFI Quarterly Report #13, 10/25/82, p. 5.

447 Henry, William A., "Challenges Met in Northern Border Pipeline," Oil and Gas Journal, 11/29/82, pp. 82-3.

448 IBID., p. 83.

449 OFI Quarterly Report #14, 1/26/83, p. 3.

450 IBID., p. 4.

451 OFI Quarterly Report #15, 4/28/83, p. 3.

452 IBID.

453 Cook, Peter L., "Final Inspection of the East Leg," OFI, 2/2/84.

454 IBID.

455 OFI Quarterly Report #16, 7/22/83, p. 3.

456 OFI Quarterly Report #17, 10/24/83, p. 1.

457 "BorderNotes," Northern Border Pipeline Company, 11/83 (Special Edition), p. 2.

458 OFI Quarterly Report #17, 10/24/83, p. 7.

459 "Group Charges InterNorth With Mismanagement," Omaha World Herald, 3/10/83.

460 Dorr, Robert, "Iowa Group Blasts Pipeline Profit; NEICO Points to Savings Success," Omaha Sunday World Herald, 9/11/83, p. 1-A, 10-A.

461 Berman, J. Richard, "Tentative Rate Base Determination Regarding Northern Border Pipeline Company's Construction Work: 1/1/80 to 3/31/82," OFI, 12/3/82.

462 "Project Management Contract between Northern Border Pipeline Company and Northern Engineering International Company," 4/30/81. From Joint Appendix, Iowa State Commerce Commission v. Office of the Federal Inspector, "On Petition for Review of Orders of the Office of the Federal Inspector for the Alaska Natural Gas Transportation System," No. 83-2156, p. 18.

463 "Transactions with Northern Engineering International Company (NEICO)," Undated draft report, Main Hurdman for the OFI, p. 1. From Joint Appendix, p. 87.

464 "Project Management Contract between Northern Border Pipeline Company and Northern Engineering International Company," 4/30/81. From Joint Appendix, Exhibit B, "Compensation," pp. 41-53.

465 "NEICo Data for the Federal Inspector," 4/6/82, p. iv. From Joint Appendix, p. 102.

466 "Transactions with Northern Engineering International Company (NEICO)," Undated draft report, Main Hurdman for the OFI, p 5. From Joint Appendix, p. 91.

467 IBID., p. 92.

468 IBID.

469 Berman, J. Richard, "NEICo Follow-Up Activities," 3/31/82. From Joint Appendix, p. 94.

470 "NEICo Data for the Federal Inspector," 4/5/82. From Joint Appendix, p. 106.

471 Letter, Rhett to William A. Henry, OFI, 5/13/82.

472 Letter, R.F. McNamara to Joseph Takacs, NEICo, 7/14/82. From Joint Appendix, pp. 122-31.

473 IBID.

474 IBID.

475 Interview, J. Richard Berman, 8/5/83.

476 "Draft for Discussion Purposes," Main Hurdman for the OFI, 8/3/82.

477 IBID., pp. 8-9.

478 IBID., pp. 10-1.

479 Fields, Rhodell, "The No Profit to Affiliates Rule and Its Applicability to Northern Border Pipeline Company," 9/27/82. From Joint Appendix, pp. 243-8.

480 Interview, Berman, 7/11/84.

481 Fields, Rhodell, "The No Profit to Affiliates Rule...," 9/27/82. From Joint Appendix, pp. 245.

482 IBID., p. 246.

483 IBID., p. 247.

484 IBID.

485 IBID., p. 248.

486 IBID.

487 Berman, J. Richard, "Tentative Rate Base Determination Regarding Northern Border Pipeline Company's Construction Work: 1/1/80 to 3/31/82," OFI, 12/3/82.

488 IBID., p. 4.

489 IBID., pp. 8-9.

490 IBID., p. 11.

491 Letter, Robert A. Hill to Rhett, NBPC, 12/30/82. From Joint Appendix, pp. 327-36.

492 Letter, Joseph R. Hampton to William Butler, Nebraska Legislative Council, 3/3/83. From Joint Appendix, pp. 337-9.

493 IBID., p. 338.

494 Letter, Diane L. McIntire to Rhett, State of Iowa Commerce Counsel, 3/11/83. From Joint Appendix, pp. 341-6.

495 IBID., p. 341.

496 IBID., p. 343.

497 IBID., p. 344.

498 IBID., p. 345.

499 Letter, Hill to Rhett, 3/24/83. From Joint Appendix, pp. 347-52.

500 IBID., p. 347.

501 IBID., p. 351.

502 Letter, Berkley Bedell to Rhett, Congress of the United States, 5/31/83. From Joint Appendix, p. 354.

503 Letter, Rhett to Bedell, OFI, 6/8/83. From Joint Appendix, p. 355.

504 Rhett, John T., "Final Determination for Approving in Part and Disallowing in Part Expenditures Claimed for Inclusion in Rate Base by Northern Border Pipeline Company," 10 CFR - Chapter XV, OFI, 9/7/83.

505 IBID., p. 6.

506 IBID., p. 7.

507 "Iowa State Commerce Commission Application for Rehearing," Rate Base Determination - Northern Border Pipeline Company, 9/2/83. From Joint Appendix, pp. 365-70.

508 Rhett, "Denial of Rehearing," OFI, 10/21/83. From Joint Appendix, p. 372.

509 "Brief of Petitioner," Iowa State Commerce Commission v. the Office of the Federal Inspector, U.S. Court of Appeals for the District of Columbia Circuit, No. 83-2156, 12/30/83.

510 IBID., pp. 15-26.

511 IBID., p. 4.

512 IBID., pp. 15-42.

513 Mobil Oil Co. v. Federal Power Commission, 483 F.2 1238, 1259, District of Columbia Circuit 1973.

514 "Brief of Petitioner," 12/30/83, pp. 13-4.

515 IBID., p. 2.

516 "Opinion," Iowa State Commerce Commission v. Office of the Federal Inspector, No. 83-2156, U.S. Court of Appeals for the District of Columbia Circuit, 2/1/84, pp. 2-3.

517 IBID., p. 13.

518 IBID., p. 9. Dissenting opinion by Judge Abner Mikva.

519 IBID.

520 Interview, Rhett, 7/16/84.

521 Inside Energy, 3/5/82.

522 Solomon, Burt, Energy Daily, 4/28/82.

523 Anchorage Daily News, 4/1/82.

524 Anchorage Times, 4/2/82.

525 Anchorage Daily News, 4/5/82.

526 Vancouver (British Columbia) Evening Sun, 4/24/82, p. 1.

527 Anchorage Daily News, 4/24/82.

528 "Pipeline Backers to Meet in Bid to Find Financing," The New York Times, 4/30/82, p. D16.

529 Wall Street Journal, 4/29/82, p. 12.

530 Anchorage Daily News, 4/29/82, p. C2.

531 Fortune, 5/31/82.

532 Financial Times of Canada, 5/3/82, p. 8.

533 Wall Street Journal, 5/3/82.

534 Fairbanks Daily News-Miner, 5/5/82, p. 3.

535 Christian Science Monitor, 5/5/82, p. 82.

536 IBID.

537 Editorial, Wall Street Journal, 5/12/82.

538 Fairbanks Daily News-Miner, 5/8/82, p. 5.

539 Anchorage Times, 5/8/82.

540 OFI Quarterly Report #12, 7/29/82, pp. 5-6.

541 OFI Quarterly Report #13, 10/25/82, p. 8.

542 Energy Daily, 5/17/82.

543 IBID.

544 Fairbanks Daily News-Miner, 5/19/82.

545 IBID.

546 Toronto Globe and Mail, 5/28/82.

547 Forbes, 7/7/82.

548 OFI Quarterly Report #12, 7/29/82, pp. 1-2.

549 Anchorage Times, 5/7/82.

550 Anchorage Times, 5/11/82.

551 IBID.

552 Editorial, Fairbanks Daily News-Miner, 5/10/82.

553 Anchorage Times, 6/6/82.

554 IBID.

555 Anchorage Daily News, 6/17/82.

556 Anchorage Times, 6/24/82.

557 Turner, Wallace, "Alaska Studies Shift in Gas Line's Route," The New York Times, 6/28/82.

558 Anchorage Daily News, 6/17/82, p. D3.

559 Anchorage Times, 6/17/82, p. B2.

560 "Exxon, ARCO Officials Assume Key Posts on Design and Engineering Board of Alaska Natural Gas Transporation System," News Release, Northwest Alaskan Pipeline Company, 7/8/22.

561 OFI Quarterly Report #13, 10/25/82, p. 2.

562 Yarie, Sally (Ed.), Proceedings: Alaska Symposium on the Social, Economic and Cultural Impacts of Natural Resource Development, Alaska Pacific University, Anchorage, August 25-7, 1982. Sponsored in part by the OFI.

563 IBID., Foreward by Sheila Helgath, p. 2.

564 Tussing, Arlon R. and Connie C. Barlow, "The Struggle for an Alaska Pipeline: What Went Wrong?" ARTA, Inc., 11/20/82.

565 IBID., p. 2.

566 IBID.

567 IBID., p. 6.

568 IBID., p. 25.

569 IBID., p. 28.

570 IBID.

571 IBID., p. 31.

572 "Issues Facing the Future Use of Alaska North Slope Natural Gas," U.S. General Accounting Office Report to the Honorable Ted Stevens, GAO/RCED-83-102, 5/12/83.

573 IBID., p. iv.

574 IBID, p. 111.

575 Lueck, Thomas J., "Northwest Energy: A Tightrope Deal Doubles Its Size," The New York Times, 12/3/82.

576 IBID.

577 "Northwest Energy: Back to What It Does Best - Gas Wells and Pipelines," Business Week, 12/6/82.

578 Lueck, "Northwest Energy...," The New York Times, 12/3/82.

579 "Alaska Proposing Japan Connection," Wall Street Journal, 1/17/83, p. 26.

580 "Trans Alaska Gas System: Economics of an Alternative for North Slope Gas," Report by the Governor's Economic Committee, State of Alaska, 1/83.

581 Fairbanks Daily News-Miner, 1/17/83, p. 1.

582 "Alaska Proposing Japan Connection," Wall Street Journal, 1/17/83.

583 "Trans Alaska Gas System...," Governor's Economic Committee, 1/83, pp. 2-4.

584 IBID., pp. 5-13.

585 IBID., pp. 15-8.

586 IBID., p. 16.

587 IBID., p. 17.

588 IBID., p. 18.

589 Toronto Daily Commercial News and Construction Record, 1/19/83.

590 Editorial, All-Alaska Weekly, 1/21/83.

591 Editorial, Anchorage Times, 1/21/83.

592 Editorial, All-Alaska Weekly, 1/21/83.

593 IBID.

594 "Issues Facing the Future Use...," GAO, 5/12/83, pp. 58-9.

595 IBID., p. 57.

596 Editorial, All-Alaska Weekly, 1/21/83.

597 "Issues Facing the Future Use...," GAO, 5/12/83, p. 57.

598 Decision and Report to Congress on the Alaska Natural Gas Transportation System, Exeuctive Office of the President, Energy Policy and Planning, 9/77. See Report, Chapter V, p. 181.

599 IBID.

600 "Issues Facing the Future Use...," GAO, 5/12/83, p. 63.

601 IBID., p. 62.

602 Hearing, "Marketing Alternatives for Alaska North Slope Natural Gas," Subcommittee on Energy Regulation, Senate Committee on Energy and Natural Resources, 11/16/83, S. Hrg. 98-743 (Washington: Government Printing Office, 1984) pp. 129-31. Testimony of E. Allan Wendt.

603 "Note No. 591," Canadian Embassy, Washington, D.C., 11/15/83.

604 Senate Alternative Hearings, p. 29.

605 OFI Quarterly Report #15, 4/21/83, p. 1

606 IBID.

607 Wall Street Journal, 4/12/83.

608 "Pan-Alberta Agrees to Let Four Firms Cut Take of Canadian Gas," Wall Street Journal, 5/1/83.

609 OFI Quarterly Report #16, 7/22/83, p. 5.

610 Crow, Patrick, "Inspecting ANGTS," Oil and Gas Journal, 8/29/83, p. 24.

611 Alaska Journal of Commerce, 3/14/83.

612 IBID.

613 Valdez Vanguard, 3/9/83.

614 IBID.

615 "Merger Agreement Announced by Northwest Energy and Allen & Company, Inc.," Press Release, Northwest Energy, 8/8/83.

616 "Why Northwest Energy Looks So Tempting," Business Week, 8/22/83, pp. 33-4.

617 IBID.

618 IBID.

619 Wall Street Journal, 8/19/83. "Heard on the Street" Column.

620 IBID., 9/12/83. Also, IBID., 9/22/83, p. 7.

621 IBID., 9/14/83.

622 "Northwest Energy, The Williams Companies Sign Merger Agreement," Press Release, Northwest Energy, 9/21/83.

623 Wall Street Journal, 9/29/83.

624 "Northwest Energy, The Williams Companies...," 9/21/83.

625 "News," The Williams Companies, 10/5/83.

626 Wall Street Journal, 9/12/83.

627 IBID., 9/26/83.

628 Letter, Rhett to John G. McMillian, OFI, 9/21/83.

629 IBID.

630 Letter, Vernon Jones to Rhett, Northwest Energy Company, 10/13/83.

631 Anchorage Times, 9/13/84, p. A1.

632 Bradner, Mike, "North Slope Gas: New Route and New Market," Energy Daily, 9/16/83.

633 "Williams to Acquire Northwest Energy," Oil and Gas Journal, 9/26/83.

634 IBID.

635 Anchorage Times, 9/16/84.

636 Editorial, Anchorage Times, 9/25/83.

637 Senate Alternative Hearings, p. 2.

638 IBID.

639 IBID., p. 3.

640 IBID., p. 11.

641 IBID., p. 24.

642 IBID., p. 33.

643 IBID., p. 35.

644 IBID., p. 133.

645 IBID., p. 135.

646 IBID., p. 41. Vernon Jones testimony.

647 IBID., p. 57.

648 IBID., p. 75.

649 IBID., pp. 93-4.

650 IBID., p. 137.

651 IBID., p. 160.

652 IBID., p. 161.

653 IBID.

654 IBID., p. 162.

655 IBID., p. 198.

656 IBID., p. 204.

657 IBID.

658 IBID., p. 210.

659 IBID., pp. 210-1.

660 IBID., p. 230.

661 IBID., p. 271.

662 IBID.